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ABSTRACT

This edition of a handbook aimed at helping parents help their children make a career choice has been rewritten and updated. New material begins with the introduction, which provides a rationale for involving parents in their sons' and daughters' career decisions. Other new material includes sections on women and work, minorities and work, professional athletes, occupational training in the military, population and labor force trends, employment projections, college costs and financial aid, and new suggestions on how parents can help a child choose a career. The Career Explorations Workbook is integrated more closely into the book than in the previous edition. The book is organized into four parts that explore (1) the changing society, including values and attitudes, population and labor force changes, and women and minority groups in the workplace; (2) the work world, including employment projections and where to find occupational information; (3) career preparation--additional schooling options such as college and vocational schools; and (4) career preparation--earning while learning, through such modes as apprenticeships, military training, on-the-job training, and federal civil service. The Career Explorations Workbook provides exercises for parents and students at the end of each of these sections. A final page of chapter notes suggests resources for further information. (KC)

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How to Help Your Child Choose a Career

LUTHER B. OTTO, Ph.D.

Today's Youth and
Tomorrow's Careers Edition

CAREER PASSPORTS **Boulder, Colorado**

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To Nancy, Nathan, Timothy, and Stephen–my wife and three sons,
for whom I have written this book,
to whom I dedicate it,
and without whom I would not have undertaken it.

DR. LUTHER B. OTTO is Professor and Head of the Department of Sociology, Anthropology, and Social Work at North Carolina State University in Raleigh. He has written several books and many articles and is recognized nationally for his research on career development. One of his books was named to the Outstanding Academic Book List by the American Library Association, he was honored with the Distinguished Service to Families Award by the National Council on Family Relations, he has received the Merit Award fron the National Vocational Guidance Association, and he has been named recipient of the 1990 Lester E. Ward Distinguished Contribution to Applied Sociology Award. Dr. Otto's biography appears in Who's Who in America.

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Preface and Acknowledgments

This edition of How To Help Your Child Choose A Career offers numerous improvements over the first edition. All of the material is rewritten and updated. New material begins with the Introduction, which provides a rationale for involving parents in their sons' and daughters' career decisions. Other new material includes sections on women and work, minorities and work, pro athletes, occupational training in the military, population and labor force trends, employment projections, college costs and financial aid, and new suggestions on how to help your child choose a career. The Career Explorations Workbook is integrated more closely into the book. This edition is taylored to meet the requirements of Today's Youth and Tomorrow's Careers, an associated program that is designed to help parents help their children choose careers.

Father Flanagan's Boys's Home (Boys Town) and the W. K. Kellogg Foundation gave institutional support at earlier stages of this effort, and this line of research, including this book, could not have gone forward without that support.

Several people made seminal contributions to this effort, and their ideas find renewed expression in this edition. I acknowledge and thank them again: Dr. Karen Bartz, Dr. Vaughn R. A. Call, Captain E. A. Davis, Cynthia Evahn, Peter Ellis, Dr. Ronald Feldman, Thomas Gregory, Dennis Harding, Monsignor Robert Hupp, Colonel Wayne Knudson, Dr. Richard Millard, Brigadier General C. E. Mundy, Jr., Reverend Nicholas Nittler, Martha Inman Paige, Michael Pilot, Dr. Kenneth Spenner, Donald Stroh, Sandra Wendel, and David Wynn.

Parents, colleagues, school counselors, administrators, teachers, clergy, youth workers, friends and strangers alike, encouraged the effort and shared insights that benefited this edition. I thank the many participants in the Career Development Study for their comments on experiences that illustrate and reinforce the key points. I express my indebtedness collectively to the many others, too numerous to mention by name, with whom I discussed one issue or another while revising the book.

With Tennyson I acknowledge that "I am a part of all I have met." My indebtedness is apparent on every page, but nowhere is it more evident than in the imprint on this work left by Nancy, Nathan, Timothy, and Stephen–my wife and three sons–for whom I have written this book, to whom I dedicate it, and without whom I would not have undertaken it.

To all I express my sincere thanks.

Thanksgiving 1989 Luther B. Otto

INTRODUCTION

Today's Youth and Tomorrow's Careers

There are 30 million young people between the ages of fourteen and twenty-one in the United States. Three-fourths of them graduate from high school, about two and one-half million per year. Sooner or later two-thirds enroll in college and a fifth eventually complete four years of college. Today, nearly all of them, young women as well as young men, will someday enter the labor force.

It concerns me both personally and professionally–and I think it might interest counselors, teachers, school administrators, policy analysts, and I know it bothers parents–that today's young people say that choosing careers is one of the biggest problems they face.

This is a book for parents. It is about parents, youth, and careers. It explains how parents can help their children choose careers. I write as a research sociologist who studies how young persons' careers develop. I also write from a parent's point of view. I have three children, three sons. The last got his diploma a few weeks ago. After the party, the older two presented us with a cold bottle of champagne in honor of "our" accomplishment! Nancy and I loved it. To be honest with you, we also thought we deserved it, felt we had earned it. We had worked for that accomplishment just as our sons had, each in his time. It was a joint effort.

This book extends the parental help role into the sometimes troublesome area of helping young people choose careers. Permit me to make a number of key points about youth and careers before I explain how I organize the book.

Young People Want Help

Young people want more help choosing careers, and they've been saying that for more than a decade.

Their needs first became apparent in the early 1970s when American College Testing, the same people that provide the ACT tests, conducted a nationwide study of the career development needs of 32,000 eighth, ninth, and eleventh graders. Eighty-four percent of the eleventh graders said they could usually or almost always see a guidance counselor whenever they wanted to, yet 78 percent said they wanted more help making career plans.

We could, perhaps, dismiss the ACT study as a musty, dusty, historically interesting but not very relevant study today were it not for the fact that the same theme keeps coming through in more recent studies. For example, since 1975 the Institute for Social Research at the University of Michigan has conducted the annual Monitoring the Future study. Each year that study surveys 18,000 high school seniors from across the country. Their latest findings are typical of what high school seniors have been saying for a decade. Two-thirds want more counseling on career plans and job choice.

Another example is the 1980 High School and Beyond Study by the National Center for Education Statistics. It's a landmark study of 58,000 sophomores and seniors as they make the transition from school to work. Those students were generally positive about their high school experience when it came to academic course work and college counseling, but the seniors were much less satisfied with their school career-related programs. Nearly three-fourths said that schools should place more emphasis on vocational programs, and two-thirds felt that schools did not offer them enough practical experience.

My own research, the Career Development Study, has followed the progress of 7,000 young men and women from the time they were juniors in high school. When they were thirty-years-old and established in their early careers, we asked them to look back at the problems they faced since leaving high school and to tell us what might be done to help today's young people prepare for the future. You'll notice that I quote these young people throughout the book. Two-thirds, exactly 66 percent, cited difficulty in establishing careers and lack of career preparation as one of the biggest problems they faced.

In 1984 American College Testing did a second study of the career development needs of the nation's youth to determine what progress had been made since the early 1970s. This second ACT study identifies areas where there has been definite improvement. For example, the proportion of students involved in career planning is higher. Nonetheless, over 70 percent of the nation's youth continue to say that they want more help making career plans.

My first point is straightforward: Two-thirds to three-fourths of today's young people want more help making career plans; and they've been saying that for fifteen years.

Parents Are Concerned

I first began thinking seriously about young people's career problems back in 1978. That same year, Gallup published the Ninth Annual Gallup Poll of parents' evaluations of public schools. In that poll Gallup asked parents what areas of parenting concerned them most. Parents of young people ages thirteen to twenty said their prime parenting concern was "how to deal with problems of drug and substance abuse." What was their second biggest concern? It was "how to help my child choose a career."

The Gallup study pursued the issue further. It asked respondents how they felt that their parenting needs should be met. More than three-fourths of the parents said they thought public schools should offer courses for parents in areas that concerned them; and the parents said they would pay increased taxes to support school-sponsored programs for parents. Can you imagine that? In an age of Proposition XIII mentality, taxpayer revolt, fiscal retrenchment policies, and school lid bills, parents said they would pay more school taxes if schools offered programs to help them!

I'm not on a soap box. My purpose is not to argue that public schools should be more involved in parent education programs. I offer a more modest observation: There is a need out there and that need isn't being met. Parents want to know how to help their children choose careers.

Teachers, Counselors and Schools

Teachers and counselors have tried to meet that need; but schools don't have the resources to give young people the individualized career guidance they want.

Today's young people want more help choosing careers, and schools, teachers, and career counselors have responded. There isn't an institution in society that has done more to help young people plan careers than have the nation's public schools. Schools have built career centers and stocked them with information on careers and career preparation possibilities. Schools offer courses on career planning. Schools provide interest inventories, computerized career-exploration and college-choice programs, and the latest information on financial aid. And nowhere is the public school commitment to career guidance more evident than in the number of counselors schools have retained. Enrollments in public schools have declined 11 percent over the last 12 years, but the number of guidance counselors has increased 20 percent. I repeat: There isn't an institution in society that has done more to help young people plan careers than have the nation's public schools.

But that doesn't mean that young people's career planning needs are being met; and it doesn't mean that the career guidance job is getting done–or that it can be done!–in career centers or by career counselors. The Center for Education Statistics reports that there are 676 students for every counselor in U. S. public schools. What do you think? Is that enough counselors? If all 66,755 guidance counselors do nothing but come to work every day–8 hours a day, 5 days a week, 4 weeks a month, 9 months a year; no teaching shop courses, no coaching football, no faculty meetings, just spend every hour working with students–under those idyllic conditions students in our society would have available to them an average of 2 hours and 8 minutes per student per year for individualized career guidance. What do you think? Is that enough?

But counselors can't spend every hour counseling. They have to teach drivers ed. They are assigned to homeroom. They have to run errands for the principal. A national Educational Testing Services study indicates that counselors spend only 18 percent of their time working on problems that concern students–like boy-girl relations, like acne, like "I think I might be pregnant," like "I need help making career plans." That means that students in public schools get an average of 23 minutes of individualized guidance per year, only part of which is career guidance. What do you think? Is that enough?

These extrapolations are more than an idle exercise in number crunching. The numbers suggest that even under optimal conditions, young people's career guidance needs are not likely to be met by pouring more counselors into the trenches for one-on-one career guidance through the schools. In my judgment that strategy is fatally flawed. And I don't expect that school finances will dramatically improve in the years ahead–and I'll bet you don't either! The number of secondary students peaked in 1976 at 14,311,000. It will be down 21 percent by 1990. School enrollments are on the decline, not on the increase. The nation's social priorities are focusing more on the old, less on the young; and the voting population is growing older. The excellence reports on public education are deflecting resources back to the basics, away from career preparation. Finally, career guidance is a pupil service, and it is not unusual for 90 percent of pupil service budgets to be earmarked for personnel. That means that fiscal retrenchment policies and school-budget cuts translate rather directly into personnel reductions.

The fact that we don't have enough counselors today and that the ratio of counselors to students in the years ahead is more likely to erode than improve suggests that it's time to examine how we use career counselors and to ask whether we are using their expertise most efficiently.

Knowledge of the Work World

Some of the most depressing research I read reports on young people's knowledge–or should I say, their ignorance–of the world of work. I'm referring to such basics as what carpenters do on the job, how you get to be a druggist, and what the probabilities are that any little boy or girl can ever become a Mark McGuire, a Chris Evert, or a Michael Jordan. Today's young people are misinformed, terribly so.

Of course they're misinformed about careers, because what society gives them is a Hollywood version of careers. What do detectives do? They shoot guns. They drive fast cars. And they crawl into bed with pretty girls. What do doctors do? Much the same, especially drive fast cars and crawl into bed with pretty girls. What do television evangelists do? Don't ask me.

Young people are equally misinformed about their career preparation options. Last fall a new Gallup Poll reported that young Americans are widely misinformed about the cost of college. Now, a college education is expensive, make no mistake about it. Annual costs of 15 to 16 thousand dollars per year are not unusual, and it takes most students 5 years to get through. As Senator Sam Ervin used to say, "after a while that adds up to real money." Yet, however expensive higher education may be, most young people think that a college education costs three times as much as it actually does. They're mistaken. They're wrong about something that can make an important difference in their futures and the rest of their lives.

Information vs. Guidance. Young people don't just need information. They also need guidance. And information and guidance are not the same. Information can be written in books. It can be cataloged. Information can be illustrated, prettied up, captured on video tapes, set on tables, stuck on bulletin boards, stacked on shelves, even stuffed into computers. But that isn't guidance. Guidance means showing young people how to find the way. It means giving directions and monitoring progress. Guidance means paying attention to how young people are progressing towards their goals. Guidance isn't just setting goals. It's also figuring out how to get there. Guidance means following through to assure that the desired outcome is achieved. Guidance means helping young people structure their options. Guidance means being available at those teachable moments when young people want to talk about their futures, not only when we adults want them to talk about their careers, or when the career center happens to be open, or when the counselor is in, or when the computer is turned on. It isn't enough to open the career center and have well-intentioned volunteers smile and say "how may I help you" to young people who happen to drop in. Young people need to be coached.

Young people don't just need information. They also need guidance. And information and guidance are not the same.

An Educational Testing Service Study concluded that career centers offer "mountains of information" and "huge collections of facts"; but, for the most part, offer young people no way to sort out what information is available to them, how to choose between alternatives, and how to make decisions. I pose two questions: Might we need to reconsider what information we give to young people; and might we also need to give thought to what is the most effective way to deliver that information? I think we have to do both.

Parental Influence

Even if schools had the resources with which to meet young people's career guidance needs, neither teachers nor counselors can replace the influence parents have on their sons and daughters career plans.

There is a myth, a widely and uncritically held half-truth, that "parents don't matter," that "my kids don't listen to me." And there are always enough stories about spaced-out teenagers floating around that people keep believing the parents-don't-matter myth.

Now, all of us, every parent, can think of examples where kids don't listen and parents don't matter. I know I can. When it comes to wearing grubby T-shirts or Izod alligators, raggedy Reeboks or the best from Florsheim; when it comes to our sons' and daughters' beliefs about the "latest" and the "biggest" and the "fastest" and the "best," you know that today's young people will do what's "in" in the high school hallways and what's popular in the pizza parlors. You can bet on it. But there are other areas where parents have a tremendous influence on young people, and one of those areas is in making career plans.

Young people listen to those other people whom they think know something about a particular topic.

The notion that parents don't matter, the idea that there is a generation gap, was popular about the turn of the century, then reasserted itself in the adolescent-society literature of the 1960s with its references to a youth counterculture, even a contraculture. But that was thirty years ago. What we have learned since then is that young people are more complex, and that they take a much more differentiated and discriminating view of issues and the opinions of others. We have learned that young people listen to those other people whom they think know something about a particular topic. And so in matters of hairstyle, dress, choice of music, or how loud to play the music, who knows most about these topics? Certainly not parents; and it should not surprise us that young people listen to their peers on these subjects. But when it comes to issues that are more basic and, I think, are more important–such as attitudes, beliefs, and values–on these more critical subjects young people listen to their parents.

A lumberman's daughter, now a statistical clerk in an insurance office in Seattle, thought back to her high school days, then commented: "Encouragement from home is so vital. Parental enthusiasm can make or break a teenager. The schools cannot replace the family."

Youth and Parents. In his classic book, *Changing Youth in a Changing Society*, Dr. Michael Rutter of Harvard University says the following:

> Taken together, the findings from all studies...indicate that adolescents still tend to turn to their parents for guidance on principles and on major values but look more to their peers in terms of interests and fashions in clothes, in leisure activities, and other youth-oriented pursuits.

Rutter later concludes:

> Young people tend both to share their parents' values on the major issues of life and also to turn to them for guidance on most major concerns. The concept that parent-child alienation is a usual feature of adolescence is a myth.

One of the great tragedies of our day is that the influence parents have on their children is so greatly underestimated and misunderstood. Our generation of parents has been psyched out. We've been duped. We've been told and retold that there is a generation gap out there, that our kids don't listen to us, and we parents have come to believe it. And so we throw up our hands and do little not because our kids don't listen to us but because we believe the myth that they don't listen. And by abandoning serious efforts to communicate with them, we leave them without advice and without guidance in a world that increasingly requires that they make decisions. My hope is that today's parents will recognize and take seriously the influence they have on their sons' and daughters' career decisions and will use that influence constructively.

To ignore the role of parents in the career development process is to deny what fifty years of studying child and youth development have taught us. Even if schools had the resources with which to meet young people's career guidance needs, teachers and counselors cannot replace the primary influence parents have on their children's career plans.

A thirty-year-old bachelor from Portland, Oregon, works as a guard for city/county government. He told us that he thinks parents should be more involved: "I believe teachers and administrators should go to extraordinary lengths to ensure that parents become actively involved in their children's education. Without consistent encouragement and an occasional kick in the butt at home, the best teachers and all the hardware in the world will not foster a positive attitude toward education in the majority of students?"

Parent's Must Prepare

If parents are to be effective career advisers for their children, they must prepare themselves.

Today's parents are poorly informed about the career options available to young people. In addition, many parents are plagued by their own career insecurities. They are trying to sort things out for themselves, to say nothing of worrying about the career problems their sons and daughters face.

It's a different world of work out there than when parents made their first career decisions. A quarter of a century ago, a father could still tell his son: "One thing about being a farmer, Johnny, they can never take the land away from you." But say that to an Iowa farmer today. Fertilizers, pesticides, herbicides, hybrid seeds, mechanization, automation, improved farm management practices, internationalization of markets, and biotechnology have changed all that. A quarter of a century ago, a mother could still tell her daughter: "One thing about being a stenographer, Honey, those big shots will always need somebody to write their letters." But tell that to a Houston executive today. Dictation equipment and then word processing changed all of that.

Today, most entry level positions are in the fast food industry. Back when mom and dad made their first career decisions, McDonalds was still working on its first billion hamburgers. But today, McDonalds has franchises in more than a dozen different countries and, as I write this chapter, five Soviets are in training at Hamburger University outside of Chicago to open the largest franchise in the world five blocks north of Red Square. How many burgers have been sold? "Billions and billions" the golden arches advertise. Today's young people live in a different world.

When the first U. S. census was conducted less than two hundred years ago, the census takers classified workers into three major groups. Either a person was in agriculture, or in business, or in manufacturing. But how many occupations were used to classify workers in the last census? More than 30,000! Remember that the next time you ask your daughter whether she's figured out what she wants to do with her life. It's no longer a simple matter to choose a career, especially when you're still a teenager on the outside of the labor force looking in.

Part of the problem today's young people face is the dilemma of choosing from so many different occupational possibilities and from so many different career preparation options.

Today's young people have the luxury of choosing not only from an abundance of new occupational possibilities, but they can also choose from more career preparation options than ever before. Part of the problem today's young people face is the dilemma of choosing from so many different occupational possibilities and from so many different career preparation options. Today's possibilities include occupational training in the military, nontraditional education programs, industry sponsored training and education, education/industry cooperative programs, and hands-on-training programs to say nothing of additional schooling in comprehensive universities and graduate schools, traditional and specialized colleges, technical colleges, community colleges, business schools, trade schools, proprietary and private and public schools.

Choosing a career and a career preparation strategy can be like grandmother taking her three-year-old granddaughter to the ice cream shop with the promise: "You can have any kind of ice cream you want." Two hours later, the three-year-old still can't decide between chocolate, chocolate fudge and chocolate goo.

Credentials. We live in a credentialing society in which the marketability of degrees has decreased while the dollar value of certificates has increased. That is evident in estimates that there may be as many people enrolled in industry-sponsored training programs today as there are people enrolled in all colleges and universities combined–roughly 12.5 million in each. Today, four times as many institutions offer certificates as there are institutions that offer degrees, and that makes today's career decisions all the more complex.

Educators have a bias. They look at education from an educator's point of view. Educators are concerned about what young people should learn, what they do or do not learn, how subject areas can be taught more efficiently, how to motivate students, and the like. These are valid and important perspectives to the educational process.

But the world of work–prospective employers, personnel officers, management teams, and project managers–have a little different view of what education is all about. From their perspective the work world looks for candidates who meet a certain set of requirements, and it looks to education and training institutions to supply those workers. The work world uses credentials, degrees and certificates, as shorthand codes with which to sort out prospective employees. As I explain later, schools and training institutions "brand" their products, "stamp" them in the same way that the butcher stamps his products in the meat counter. Employers who shop for employees look at the labels till they find what they're looking for. Credentials in the form of degrees and certificates make the sorting process run smoothly.

From a young person's point of view, credentials are the magic keys that open doors. Employers sort out prospective employees "on paper" to come up with a short list that they may decide to interview. That makes credentials, degrees and certificates, critically important as doorways to the labor force. It means that young people must decide not only what line of work they wish to pursue, they also have to decide how to qualify for that line of work.

Today's career decisions involve choosing both an occupation and a career preparation strategy; and if parents are to be effective career advisers for their children, they must prepare themselves for both.

Career Guidance. Unfortunately, the way our society goes about the business of career guidance hasn't kept pace. The way we go about career guidance goes back to a book written by Frank Parsons in 1909 titled Choosing a Vocation. In his book, Parsons laid out a simple three-step process for choosing a career. The first step was to discover your interests and abilities. The second step was to learn all you can about occupations. And the third step was to match your interests and abilities with occupational characteristics–"true reasoning," Parsons called it.

We've built industries around each one of the three steps Frank Parsons told us to follow. Discover your interests and abilities? That's what measurement is all about, the interest inventories and aptitude tests. The Kuders, the Harrington-O'Sheas, the Strong-Campbells and a lot of other people, they're all working on step one. The second step was to learn all you can about occupations. Today there are scores of publishers who advertise some kind of an occupational reference book. The book publishers, they're working on step two. Match your interests and abilities with occupational characteristics, the "true reasoning" part of it? That's what the counseling enterprise is all about. Counselors point people to the measurement and assessment instruments, on the one hand, and to the occupational and career preparation resources, on the other hand. They're working on step three.

Beyond Parsons. The problem is that the career counseling enterprise hasn't gone very far beyond that three-step process over the past eighty years, though I needn't remind you that things aren't all that simple anymore. The three-step strategy may have been enough in 1909, when Frank Parsons wrote his book. It may have been enough before the Model A Ford, before the airplane, the jet, the rocket, and the space shuttle. Parsons' advice may have been adequate before television, satellite communication, and computers. It may have been enough before unemployment rates of 10 and 12 percent, before youth unemployment rates three times that high and before at-risk, inner-city, minority youth employment rates five and six times that high. But Parsons' three steps and the industries that have grown up around them aren't enough today.

It isn't enough for today's young people to know what they want to do. Their choices have to be based on available options, not on some outmoded, frontier mentality that anybody can be anything they want to be.

It isn't enough for today's young people to know what they want to do. Their choices have to be based on available options, not on some outmoded, frontier mentality that anybody can be anything they want to be. Today's young people have to know where the employment opportunities are and how the labor market expands and contracts in response to population and labor force changes.

It isn't enough for today's young people to know about occupations, the lines of work that might interest them. Today's young people also have to know about industries, the broad fields of activity that engage employers, and whether the fortunes of particular industries are rising or falling.

It isn't enough for today's young people to decide on an occupational career. Today's young people also have to decide on a career preparation strategy. On the one hand, a high school diploma may no longer guarantee a good job. On the other hand, college is not the only way to prepare for a career. Indeed, it may not be the best way to prepare for a labor market in which one of four workers is already overeducated and underemployed.

Today's young people have to know how to make intelligent and responsible decisions about both occupational careers and career preparation options. They need to learn how to make career decisions because they will be making career decisions every three or four years over their forty-five year work histories.

Parents Need Resources

If parents are to advise their children about careers, they need programs and materials with which to work. That's what this book is all about. The goal is to help parents help their children choose careers.

I learned from my own experience as a parent that I had "to get my act together" if I was to help my children choose careers. I recognized that I needed an organized and systematic approach. It had to cover the important bases. The information had to be accurate and up to date. It had to be interesting. It had to be practical. And it had to be down to earth and usable.

I became interested in young people's careers for personal reasons, not only for professional reasons. When my oldest son turned sixteen I wanted to help him think through his career possibilities, like most parents do. I knew the research on young people's career development. I was familiar with the studies that show the importance of parental influence on youngster's career decisions. My own research showed the same thing. Yet, like a lot of other parents, I was uncertain about how to use my influence constructively with my oldest son.

I followed my academic instincts and made some trips to the library, went to the book store, even did a computerized literature search. All of those efforts added up to very little because there was little available to help parents help their children choose careers. "Necessity is the mother of invention," my father was fond of saying, especially when he had a chore for me to do that I thought was too hard or would take too long, and necessity describes the origin of this book. I wrote it out of necessity. I needed material that I could use with my own children. I've hoped that other parents and young people could benefit, too, and indications are that they have.

This book is the primary information source for a companion program named "Today's Youth and Tomorrow's Careers." That program is now in it's fourth edition and is used extensively by parents through high schools, youth organizations and churches across the country.

The acceptance that the book and program enjoy doesn't mean that we have solved the youth career-choice problem. We haven't. And it doesn't mean that the book and program is perfect. It isn't, though we do keep working on it to make it the best we can. The acceptance that parents have given the book and program simply means that there is a need out there and these materials meet that need. It means that parents respond to opportunities to learn how to help their children choose careers. It also means that counselors will use programs that help them use their training, their expertise, and the information they have at their fingertips to multiply their effectiveness.

The book and program focus on the dual roles of parents and counselors. Parents have the most influence on their sons' and daughters' career plans, and counselors have the expertise, the information, and the resources that parents and young people need and can use to make intelligent and responsible career decisions. The materials enable parents and counselors to work together to help young people choose careers.

Allow me to say a bit more about about Today's Youth and Tomorrow's Careers. Then I'll explain how I organize this book and how you can get the most out of it.

Today's Youth and Tomorrow's Careers

Today's Youth and Tomorrow's Careers is a two-step program. Counselors first attend a training workshop to receive career information and to learn how to teach parents to use their influence constructively with their sons and daughters.

Counselors teach parents how things have changed since parents entered their own careers. Counselors teach parents how to think about today's work world, about what occupational information is available and how to use it. The second half of the program teaches parents about career preparation options. Parents learn not only about today's additional schooling options but also about "earning while learning possibilities" including apprenticeships, occupational training in the military, and industry training and education programs. When parents find out what resources are available to help today's young people choose careers, their response tends to be one of two things. Either they say: "I wish we'd have had that when I was a kid;" or they ask: "Has my son or daughter been in here yet?" I've never met a high school principal who didn't like that kind of enthusiasm coming out of the career center.

Today's Youth and Tomorrow's Careers establishes counselors as career experts and teachers. It identifies counselors in their local communities as people who have access to the best information about occupational careers and career preparation possibilities. The program gets parents involved. It brings parents into the career centers to work with their sons and daughters. Today's Youth and Tomorrow's Careers is a tool that helps parents help their children choose careers.

Laser-Beam Mousetrap. I have an advertisement in my files. Someone sent it to me. It's for a laser-beam mousetrap. It's one of those gadgets for the executive who has everything.

The laser-beam mousetrap works like this. The contraption is a plain, ordinary mousetrap, a board with a spring on it. But the spring on the laser-beam mousetrap is tied down with a little piece of string, a piece of fish line. Also, there is an electric eye aimed across where the trap holds the cheese. And, of course, the laser-beam mousetrap has a laser beam.

When the furry, little bundle of peace and joy tippytoes up to the cheese, the mouse interrupts the eye beam, and the eye beam triggers the laser beam. But the laser beam doesn't zap the mouse–nothing that gross! The laser beam burns off the string that holds down the spring, and snap! Wham-o! You've got him! Right in the laser-beam mousetrap.

The laser-beam mousetrap is just like the spring-loaded traps you can buy for less than a buck a pair at K-Mart. But the laser-beam mousetrap differs from the K-Mart trap in three ways. First of all, the laser-beam trap has an eye beam. Second, the laser-beam trap has a laser-beam. And third, the laser-beam mousetrap has an honest to goodness price tag of fifteen-hundred dollars–yes, $1,500! The laser-beam mousetrap is simply the same old K-Mart trap with some fancy gadgets attached.

Getting parents involved in helping their son's and daughters choose careers is not a laser-beam mousetrap. It's not the same old stuff rehashed. Focusing on parents is a different approach to the business of helping young people choose careers. It's a strategy that traditional career guidance ignores.

Parent Preparation

This book is not an effort to create another guidance system, but it is an effort to take the best information available and to put it to work more effectively.

Over the years I have attended many national conventions for career counselors, but I am reminded of the first one I ever attended. I walked through the exhibition hall where hundreds of booths featured career materials of all shapes, colors, descriptions, and kinds. The exhibits were heavy with promotional gimmicks. Some were computer driven. Others were based on films or videos. A few were self-scoring. Many were available for the first time in paperback. Still others were packaged in pink and purple three-ring binders. Forgive me, Lord, but I thought I stumbled across a circus.

I listened carefully to the conversations between buyers and sellers. The promoters emphasized how easy the programs were to use, how handy they were, how nice they looked, how little space they took on the book shelf, how many young people counselors could process in an hour or so, and, of course, attractive purchasing plans. But seldom did I hear information about how accurate the material was, whether the system was valid, or if anybody knew whether the program worked. In all too many cases what was pushed, polished, and promoted was another laser-beam mousetrap, the same old spring-loaded board with some newfangled attachments and a fancy price tag.

Parents have to spend at least as much time helping their children choose careers as they spend planning their next two week vacation.

The fact is that most career programs are based on the same information that is readily available from the Department of Labor at a modest cost. I'll put you on to that bargain buy in a later chapter. One of my goals is to put parents back in the driver's seat and to point them to the best resources for doing the driving. My intent is to give parents a way to do a better job of advising their children about careers.

But if parents are to take charge, they must prepare themselves. They can't sit back and be cheerleaders or grandstand fans. Parents have to spend at least as much time helping their children choose careers as they spend planning their next two week vacation. This book gives parents a map of the options young people have for choosing an occupation and choosing a career preparation strategy.

What's Ahead

Now that you know "where I'm coming from," let me explain how I organize this book.

I divide the book into four parts. Each part ends with a section on "What Parents Can Do" and a section of the Career Explorations Workbook that applies to the material covered. The workbook helps young people sort out their career options and teaches them how to make career decisions.

Part 1 gives background information to help parents understand the world of work in which today's young people must find their careers. It reviews major population and labor force changes that affect today's career choices and explains how the world of work has changed since you and I may have entered it a quarter of a century ago. It explains how society processes young people, how it lines them up with appropriate occupations, and how society discriminates against females and racial minorities. It outlines how parents influence their children and summarizes what 30-year old young adults say about the problems they had making career decisions and entering the labor force.

Part 2 focuses on the work world. It points out how work is central to the rest of life and introduces important concepts for thinking about careers. Part 2 provides employment projections for industries and major occupational groups. It explains where to find and how to use additional information on occupational careers.

Part 3 is the first of two parts on career preparation options. Part 3 covers the educational options young people have. It discusses college programs and weighs the outcomes of a 4-year college education, on the one hand, and vocational preparation programs on the other. It explains where to get more information on additional schooling possibilities and discusses college costs and financial aid.

Part 4 shifts attention to earning-while-learning career preparation options. These include apprenticeships, industry training and education programs, and occupational training in the military. It discusses the advantages and disadvantages of each.

A short Epilogue follows Part 4, as do Notes that include citations for each chapter.

Concluding Thoughts

Two additional themes are woven in and out of the chapters that follow. They are critical to the success of involving parents in helping young people choose careers. Permit me to conclude this Introduction by defining those themes more clearly.

The first is a question: Who decides? Who decides your son's or daughter's career? Putting parents back in charge of their sons' and daughters' career plans doesn't mean that Mom and Dad should decide for son or daughter.

Yet, the realities are that choosing a career can be frustrating, and sorting out career preparation options can be expensive. Some wag has said that for every problem there is always somebody with a simple solution and it's usually wrong! When it comes to choosing a career, there are neither quick and dirty solutions nor magical formulas. There are only practical approaches and reasonable steps that parents and young people can take together.

The steps are outlined in the Career Explorations Workbook. Taken together, the Workbook teaches young people "how" to make career decisions. It divides the career-choice process into manageable steps. Each step provides different ways to arrive at a career decision.

Our sons and daughters must make their own decisions just as we had to make and live with our decisions. That doesn't mean that we set them adrift. Too much of that has already been done. But it does put parents' advisory role in proper perspective. It is not for us to push, pull, entice, threaten, or cajole our sons and daughters into anything. Career choice is their decision, not ours. Our job is to give them the best help we can: help them understand their interests and labor-market realities; help them sort out their career-preparation options; and give them the freedom to make their own decisions.

Young people need to be coached. It's their ball game, not ours. Our job is to help them come up with a game plan, explain the play options, help them anticipate and evaluate the possible consequences, and make sure they understand the rules of the game. It's always their ball game, not ours.

Who decides? They do.

Starting Over. There may be no quick answer to your son's or daughter's career search, and there may never be a perfect solution. To think that the question of career choice is settled once and for all is to retreat to the old-fashioned idea that people choose a career for life. That's the way we used to think about it–once a carpenter, always a carpenter–but it's not the way things are today. The average length of stay on a job in the U. S. labor force is less than five years. That means that today's workers will change jobs seven, eight, or nine times over their work histories. They need to learn how to make intelligent and responsible decisions, which means somebody has to teach them. The sooner we teach them, the sooner and longer they can benefit from knowing how to make career decisions.

We live in a forgiving society. People can change jobs and start over. They need not be stuck. They can always go back to school or get new training. True, the options foreclose as we get older, but we oldsters need to remember that our young people still have time and they still have options. They have an advantage. They can change their minds without jeopardizing their retirement programs. They can make mistakes. They can always start over. It's one of the benefits of living in a free society. Let them–indeed, help them–play out their options.

Today's workers will change jobs seven, eight, or nine times over their work histories.

The end result may be some peace of mind for parents, not what comes when a job is finished or, for that matter, when a job is well done, but the satisfaction that comes from having done what a parent can do to assist a son or daughter choose a career. The end result for our sons and daughters will be a better understanding of their own interests and abilities, more information about their occupational and career preparation possibilities, and some sense, however tentative, of how and where to begin. That's a start.

The whole approach may come unglued six months later, or just three months later. What do we do then? We pick up the pieces and start over again. Why? Because young people need all the help they can get, and because parents have a big influence on their son's and daughter's career decisions.

What better reasons are there than that?

Career Explorations Workbook

Each part of the book ends with suggestions and activities for what parents can do. These include a Career Explorations Workbook for parents to use with their children. The Workbook takes young people through decision-making steps that help them do two things:

> Think through their occupational possibilities and career preparation options.
>
> Teach them "how" to make career decisions.

Part 1 of the Workbook helps young people develop a list of occupational possibilities to think about. Part 2 helps them gather and evaluate information about the occupations that interest them. Parts 3 and 4 relate to career preparation. Part 3 explains where to find and how to get information about additional schooling possibilities. Part 4 shows what information is available about earning while learning options: apprenticeships, industry training and education programs, occupational training in the military, and full-time work following high school.

All young people are not at the same place in their thinking about careers. Some, often the older ones, will be ready to complete all four parts of the Career Explorations Workbook. Others may not be as far along in their thinking and may get stalled before completing it. If that happens, set the Workbook aside for a few weeks. Come back to it later.

Some won't respond at all. As the father of three sons, I know the frustration and sense of helplessness parents sometimes feel when their sons and daughters don't respond. It can be irritating, as irritating as anything I know. When he was younger, my oldest son had a four-wheel-drive vehicle with stereo speakers wired to the gills. More than once he wheeled that bright yellow chariot home to the suburbs after 11 P.M. with 60 amps of stereo operating full blare ("half blare," he says). But my respectable pre- and postretirement good friends and neighbors hit the sack at least a half-hour earlier. Do you suppose I could get this generational time-zone difference across to my own flesh and blood? No way!

But there is another side to the story, a word of encouragement that needs to be told. For all their headaches and heartaches, parents really do have the biggest long-term influence on their children when it comes to choosing a career. This book will help parents understand how to exercise that influence wisely.

The Career Explorations Workbook gives a snapshot of where young people are in their thinking today. Their thinking may change six months from now or next week; but the procedures for making a career choice remain the same. Young people can follow the same steps for clarifying their thinking in the future. It is important that our sons and daughters know what information is available and where they can get good information. The goal of this book is not only to help parents point their sons and daughters in a certain career direction, but also to teach young people how to make career decisions.

1

OUR CHANGING SOCIETY

One

Things Have Changed

What do you want to be when you grow up?" We ask that question of little boys from the time they are big enough to walk and old enough to talk. More and more we're asking little girls too.

It's a tough question. And when we hear their answers–yesterday a police officer, today a sunken treasure scavenger, tomorrow a motorcycle stunt rider–we realize that our children seem to be living in a different world. They are.

Our sons and daughters will always live in a different world. We hope that by the time they leave high school they will have shed their TV fantasies, will have their feet on the ground and their heads screwed on straight, and that they will be a little more realistic about things. But more realistic about what? About the world we lived in when we were their age? Or about the world they will be part of tomorrow?

Choosing a career involves young people in a decision about how they will fit into a changing world. But what is that world like? And how is it changing? In this chapter I examine changes in two areas that concern us. I sketch major population changes that affect the labor market and outline how the labor force is changing too.

Population Changes

The U.S. population is changing; and population trends, more than anything else, affect the career options our young people have. How large the population is, its rate of growth due to births and immigration and mortality, changes in the age structure of the population, changes in race and gender composition, and migration patterns all affect consumer buying and, therefore, demands for workers in the production of goods and delivery of services.

Population Growth

The first U.S. census was held in 1790, two hundred years ago, and fewer than four million people were counted. The country was young. Half the population was under age sixteen. Families were large. Almost half had six family members and a fourth had at least eight.

Our country's population increased dramatically over the years that followed:

5 million by 1798

10 million by 1822

50 million by 1880

100 million by 1915

200 million by 1969

On January 1, 1989 our population stood at 247 million people–and we're still growing. In 1970 we averaged 57.5 persons per square mile. In 1980 we averaged 64 persons per square mile. By the year 2000 we will average 72 persons per square mile, and our population will be at least 285 million.

Although the U. S. population is growing, the rate of growth will be slower over the next decade than it has been over the past two decades. Because population growth will slow, labor force growth will also slow down. The labor force increased about 35 percent from 1970 to 1985, but from 1985 to 2000 it will grow only half as fast.

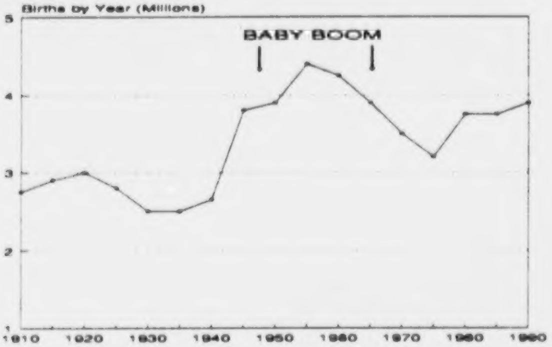
Growth Trends. We've been growing as a nation, but the source and extent of that growth has been varied and uneven over time. Most population changes since the turn of the century have been due to changing birth rates. First there was a lengthy period of modest growth (1909 - 1945). Then the spectacular growth of the baby boom occurred (1947 - 1964). More recently (since 1965), the majority culture birth rate has been negative, but the population has grown due to immigration and high minority birth rates. Consider the following birth rate changes that comprised the baby boom:

> For thirty-seven years, 1909 - 1945, the average number of births per year was 2.7 million. But in 1957 it was 4.3 million! That's a sudden increase of 60 percent.
>
> For eleven consecutive years, 1954 - 1964, more than four million babies were born each year.
>
> For seventeen years, 1947 - 1964, women averaged more than three babies each.

> For twenty years, 1946 - 1965, the number of births spurted up by 50 percent. Society added seventy-six million people to the population, more people in those nineteen years than the total number added over the first hundred years of our nation's history!

How many people were born during the baby boom? Suppose that over a fifteen-year period three countries the size of Canada packed up and moved into the United States. That's the size of the baby boom–three times as many people as the total population of Canada. That comparison gives you an idea of the impact the baby boom had and continues to have on the labor market (Figure 1:1).

Figure 1.1. The baby boom (1947 - 1964) in historical Perspective



Equally important is the fact that the baby boom was preceded and followed by periods of depressed birth rates. First, there were fifteen years of very low birth rates, then two decades of very high birth rates, and then the baby bust started. By the mid-1970s the number of births dropped back from well over four million to three million per year. The average number of babies born per woman dropped from 3 to 1.7, lower than it's ever been. The rate and number have held fairly constant at those levels ever since. We are not now reproducing ourselves as a society.

Where We Fit

How do we parents and our youngsters fit into those trends? Most parents of today's high school age children are in the 40 to 50 year-old bracket. That means they were probably born either before or at the very beginning of the baby boom, sometime around 1940 and 1950. Chances are those parents didn't feel the population crush that followed. Most parents of today's high school students were born just ahead of the baby boom.

And what about today's high school students? They're part of the baby bust period that followed, the years after the baby boom when birth rates tumbled. The point is that both today's parents and young people were born during periods of depressed birth rates, but in between there was a population explosion and that occurrence has a profound effect on today's and tomorrow's career options.

Baby Boom Echoes. The baby boom is a vivid example of how birth rates and population trends affect careers.

Population predictors expected a growth spurt when the GIs came home after the war. In the 1940s some predicted that the nation would reach 157 million people by 1970, but by 1970 it reached 204 million and was still growing at about 2 million people per year.

The baby boom burst societal seams since the day it started, and we haven't seen the last of it. First it spilled out of the maternity wards and into hospital hallways. Then it overcrowded classrooms and forced schools into temporary buildings. Expenditures for public schooling nearly tripled during the 1950s. By 1970 colleges and universities couldn't keep up with the growth and the baby boom glutted the labor market.

The baby boom had other surprises for society. Fifteen-to twenty-four-year-olds typically commit about 40 percent of the murders, 50 percent of the rapes, and 65 percent of the robberies and burglaries. The more people there are of that age, the more crime is expected. And that's what happened. Seventeen and eighteen years after the peak years of the baby boom, murder, rape, robbery, and larceny rates reached all-time highs not because people suddenly became more evil but because there were more people to do evil deeds. The youth problems of the 1970s–overcrowded schools, overcrowded jails, delinquency, crime, and youth unemployment–that's what the baby boom was all about fifteen to twenty years later.

Business and the Baby Boom. What did the baby boom mean for business? In terms of size, it was like ordering a bag of potatoes but getting a whole truckload dumped on your front doorstep. It was great for those who were ready for it. It smothered the unprepared.

Consider the styles, the fads, the music, the films, the jackets, the boots, the jewelry, the guitars, and all other novelties that were invented, manufactured, and sold during the age of the "hippies," the "yippies," the "Now Generation," the "Pepsi Generation," and finally the "Me Generation." The baby boomers bought Davy Crockett T-shirts, coonskin caps, and all that went with it. They bought more than $100 million worth of Barbie dolls and related accessories, back when $100 million dollars was a lot of money. They gave us rock 'n roll. They went to Vietnam, they fled to Canada, and they gathered at Woodstock. And they're not finished.

Barbie doll is now a grown up lady. She's legally "of age," old enough to buy liquor and old enough to vote. Barbie's manufacturer, the Mattel Toy Company, went on to build a new $375-million-a-year industry in adult electronic toys. Gerber baby food, which once advertised that "babies are our only business," went into life insurance. Gerber now babies the over fifties, and business is booming. The Wrigley Company, makers of bubble gum, went on to produce Freedent chewing gum for denture wearers. Levi Strauss came out with a line of Levi's designed for the guy who needs a little more room in the seat and thighs. Hospitals closed obstetric and pediatric departments but expanded coronary care. And McDonald's, for years the malt, burger, and fries feedbag for the nation's young, added Egg McMuffin breakfasts for the on-the-way-to-work crowd and Chicken McNuggets for the cholesterol conscious. The smart money loved the baby boom and still does.

Population researchers are fond of comparing the baby boom to a python that swallowed a pig. The bulge doesn't get digested right away but keeps moving through in one big glob. Barring World War III, disease, famine, or an act of God, the baby boom will continue spilling into the hallways until it gobbles up pension and social security systems, makes a blue-chip business out of retirement communities, and finally returns to the hospitals from whence it came.

Today's and tomorrow's career opportunities are closely tied to the fortunes of the baby boom.

The baby boom wasn't just something that happened thirty or forty years ago, part of past history. It's very much alive today. Indeed, the baby boom is driving the nation's economy. The youngest from the baby boom are approaching thirty years of age and the oldest are in their mid-forties. They are in their peak years as producers and consumers. They are today's trend setters who define our consumption appetites (BMWs), our life styles (DINKs, "dual income no kid" couples), our attitudes (yogurt), and our behaviors (aerobics). Today's and tomorrow's career opportunities are closely tied to the fortunes of the baby boom.

Competition. The baby boom has been and will continue to be good for business, but it's been tough on its own generation of young people. The largest classes in U.S. history graduated from high school in the late 1970s and early 1980s, only a decade ahead of today's young people. They wanted jobs and the beginnings of careers. They wanted souped-up cars, stereos, leather jackets, ghetto blasters, and fun money. They wanted a fair start, like all eighteen-year olds do.

But there were so many of them that in many cases there wasn't enough to go around. Proportionally, there were fewer jobs. It was difficult for young people to get the jobs to earn the money to enjoy the young years and the good life. In truth, very few baby boomers drive BMWs. Only 6 percent qualify for "Yuppy" status, as we have grown fond of labeling them. By comparison, the low education, low income segment of the baby boom population accounts for 63 percent of the baby boomers.

As an age group the baby boom generation really hasn't had it all that good. This group has already had more than its share of problems and frustrations, and the outlook isn't any better. As they enter their peak employment years, there are still 50 percent more of them than there were workers a generation ahead of them and behind them. It will always be tight for the baby boomers:

> Worker supply may always exceed demand.
>
> Greater competition for promotions will continue.
>
> Incomes may suffer.
>
> The prospects for career disappointment will continue to be high.

This is not to say that everything has been on the minus side for the baby boom generation. In some ways young people never had it so good. They grew up without fear of polio, diphtheria, and other infectious diseases. Their chances of going to college were twice as good as the chances their parents had. They were raised during a period of national prosperity and they were nurtured in a life-style unknown by their parents. Females enjoyed higher educational achievements and better labor force opportunities than ever before. Today, nearly 50 million American women are gainfully employed, and most are females from the baby boom years. Two-thirds of women born during the baby boom are working. It hasn't all been bad for the baby boom generation.

Today's Youth

Whatever the eventual fate and fortune of the baby boomers, today's young men and women should fare better. The baby-boom population bulge keeps moving out of the way slightly ahead of today's young people and it leaves empty chairs behind. As we enter the 1990s young people will have more elbow room in the labor market than did young people a decade earlier. Indeed, the population trends suggest a strong demand for entry-level positions for children of the baby-bust generation at the time they graduate from college.

As we enter the 1990s young people will have more elbow room in the labor market than did young people a decade earlier.

The U. S. may never again be as youthful as it was in 1970, when the number of elementary school age children (ages 5 - 13) reached 37 million. By 1986 this group had dropped to 30 million. It will peak again at 34 million in 1995, then fluctuate between 32 and 34 million well into the next century.

The high school age group reached a high of 17 million in 1970. Today it is down by a third to 13 million. During the 1990s the number of high school age young people will slowly rise. It will be at about 15 million by the turn of the century.

The population dynamics that are in motion are more apparent when comparisons are made of how the numbers of young people in specific age groups have changed in the past twenty years. For example, in 1970 there were 4 million more children of school age, ages 5 - 17, than adult age, ages 25 - 44. But today there are 33 million more adults than children of school age!

Today's youth will be in a situation similar to that of we parents who were born before or at the beginning of the baby boom. We appeared on the scene when birth levels were low. Compared to the baby boom generation, we "had it made."

> We attended smaller classes.
>
> There was less competition to be cheerleader.
>
> The football team could always use one more body to bounce around.
>
> The labor market, not the labor room, was booming.

As we move into the 1990s there will be a shortage of young workers. It's already evident in the fast-food industry and supermarkets where mothers-gone-back-to-work are serving up those Big Macs and grocery carry-out "boys" are drawing social security checks on the side. Population changes are opening up the labor market. The opportunities are there.

Real World Opportunities. The baby boom wasn't just a big bang a few years back. That explosion keeps echoing. The reverberations remind us that today's young people follow a much larger age group that is pushing its way through society. It needs products and it needs services, and the demands change over time. Fortunately, this means jobs for our sons and daughters, but the job opportunities will be in selected areas. Young people will have to be realistic. They'll have to be in touch with the real world.

Many of the Career Development Study participants commented on the need to be in touch with "the real world." A welder urges more vocational training: "Train them for the real world, not some fantasy where everybody goes to college and lives happily ever-after," he told us. A young lady with a master's degree in business administration is the manager of an electric light and power utility in a small town. Her advice is: "Be realistic. There is no utopia and I think we should stop pretending there is." And a fruit farmer who majored in business put it this way: "Work is hard and sometimes a burden.... For a long time after college I looked for that 'perfect job.' They don't exist. Life isn't perfect."

Unfortunately, trying to anticipate tomorrow's real world doesn't make the task of choosing a career any simpler. That makes it even more important to help your child choose a career.

Minority Youth

Employment prospects will improve in the years ahead, but youth unemployment and problems of career choice will not disappear; they will shift. Teenage unemployment, which is usually three times higher than adult unemployment, will become a minority problem increasingly.

Today, about 14 percent of all adults in the U. S.–indeed, 20 percent of children under age 17–are Black, Hispanic, Asian American, or American Indians. In 25 of our largest cities and metropolitan areas, half or more of public students are minority. By the year 2000, 42 percent of public school children will be minority.

The situation with Hispanics illustrates the point. There are 18 million American Hispanics today. Hispanics are the second largest minority, and they are increasing. Their number could double shortly after the year 2000, if the Census Bureau's highest predictions are accurate; and the Spanish population would be growing by 1 million persons per year. By the year 2010, the fraction of the population that is Hispanic could increase from 7 to 14 percent. Were the trend to continue, there would be 4 times as many Hispanics by the year 2030 and nine times as many by the year 2080.

The U. S. population is expected to grow 18 percent by the year 2010. If the Census Bureau's fast-growth projections are correct, Hispanics will increase 133 percent over the same period and will replace Blacks as the nation's largest minority. Conservative projections are more modest, but even the most conservative anticipate a 57 percent increase in the Hispanic population, three times higher than the general population increase.

Minority Unemployment

Minority young people have always experienced higher unemployment rates than White adolescents, and the difference has increased during the past quarter century. Today, unemployment rates for Black young people are more than twice the rate for White youth, and unemployment rates for Hispanic young people usually falls somewhere between the rates for Blacks and Whites. The difference in Black-White youth unemployment rates has steadily increased, not decreased, since the 1950s. The racial difference in young people's unemployment rates increased at the same time that there was heightened awareness of racial discrimination and society was adopting social policies to reduce the difference. Unemployment rates for minority youth increased during the Civil Rights era.

Without a doubt racial discrimination is a large part of the problem. But other causes must be considered also. The high unemployment rates of young Blacks were caused in part by the mass migration of southern Blacks to northern cites following World War II. At the time that minority young people were growing up in central cities, youth employers were moving out. New growth industries that employ young people, such as fast-food services, blossomed in the suburbs. There was low, sometimes negative employment in occupations that traditionally employed young people in central cities. For a number of reasons, then, peak minority unemployment rates reached 55 - 60 percent in some central cities.

Schooling, Dropouts, Illiteracy and Income. It is also the case that minorities bring less to the labor force by way of levels of education and training (Table 1:1). At every level the schooling achievements of Whites are higher than those for minorities, and usually the differences are substantial. School dropout rates for minorities is especially high: 45 percent among Hispanics and 35 percent among Blacks. Illiteracy rates are higher: 47 percent of all Black seventeen-year-olds are illiterate.

Table 1:1 Years of College Completed by Adults (Aged 25 or Older) in the Total Population and by Race, 1987

Population	1-3 Years College	4 or More Years College
Total	37.0%	19.9%
White	37.8%	20.5%
Black	26.4%	10.7%
Hispanic	21.9%	8.6%

Whereas education and training is a measure of credentials for occupations, income measures how well workers do financially as a result of employment. Household incomes for Blacks in 1990 is, on average, less than two-thirds that reported by Whites. Society converts levels of education and training into levels of occupational prestige, and it converts occupational prestige into income. Because minorities bring less to the labor force, they take less away.

If levels of education and training are the key to successful employment, and they are, how can minorities with low levels of achievement, high dropout rates, and high illiteracy rates compete successfully? They can't. And they don't.

Youth unemployment rates, both majority and minority culture, have fallen as the baby bust generation, with its exceptionally low birth rate, follows the baby boom generation. But young people, including your's and mine, will always be in competition for the best jobs. The message to parents is straightforward: When it comes to careers, young people need all the help they can get.

Migration

There are other population changes that affect career opportunities. One is migration. Americans move from place to place. One of four Americans live outside of the state in which they were born, and every year one of five relocate. But not everyone is equally likely to move and, when people do move, they tend to bunch up in certain areas of the country rather than distribute themselves evenly. This makes a difference in the local economies to which and from which they moved. Migration patterns affect career opportunities.

In recent years America's moving patterns went into reverse. Earlier, people moved to the northeast and the north central states. The "good life" was thought to be in agriculture, heavy industry, the automobile industry, and in the equal opportunities believed to be in the nation's capital.

But the energy crunch turned things around. In the decade from 1970 to 1980 the population of the Midwest grew only 4 percent and that of the Northeast even less, .2 percent. By comparison, the South grew 20 percent and the West grew 24 percent. In the 1980s nine of the ten most rapidly growing states were in the South and West. In-migration has been the engine of change. People have been moving out of the "frost belt" and into the "sun belt." Ninety percent of people who move have been heading south and west. The anticipated regional population changes between 1980 and 2000 are as follows:

West	+45%
South	+31%
Midwest	0%
Northeast	-6%

Not only are the big population gains in the South and West, but more than half the gain is in just three states: California, Texas, and Florida. Over the past decade the South has had the greatest numerical increase in population while the West has had the greatest percentage increase. If the trends continue, the combined population of the South and West will be greater than the combined population of the North and the East in the near future.

Following are the fastest growing states and the states with the largest population growth:

Fastest Growing States	States With Largest Population Growth
1. Alaska	1. California
2. Nevada	2. Texas
3. Arizona	3. Florida
4. Florida	4. Georgia
5. Texas	5. Arizona
6. California	6. Virginia
7. New Mexico	7. North Carolina
8. Utah	8. Colorado
9. New Hampshire	9. Washington
10. Colorado	10. Maryland

The number of new births normally more than replaces the number of people who migrate out of a state with the result that no real loss in population occurs. But things have changed. Since 1970 the amount of out-migration has been so great in some regions–for example, New York, Pennsylvania, Rhode Island, and the District of Columbia–that these areas have declined in population. Fifteen other states, eight of them in the South, had lost people during the 1960s but, in recent years, have been gaining people. Between 1980 and 1988 the South grew by 12.3 percent, gaining 4.5 million people; and the West grew by 17.4 percent, gaining 2.9 million people.

The movement of people to the West and the South is reflected in school enrollment patterns:

Change	Region
Increases	West
Decreases, 10 percent or less	South
Decreases, 15 percent or more	East and Midwest

Consider the implications. Some years ago the number of high school graduates decreased nearly 5 percent in the state of Kansas, but the number of graduates increased 7 percent in the state of Nevada. The implications for school taxes, teacher employment, and teacher salaries are obvious. If you had been a school teacher looking for work, where would you rather be: Kansas or Nevada? If you wanted a salary increase, where would you be more likely to get one: Kansas or Nevada?

Migration and Careers. The flow of people across the country from north and east to south and west has important career implications. Consider the areas that lose people. First, States lose their tax base, i.e., people who pay the bills. Second, though the number of tax payers may decline, the level of public services–roads, bridges, sewers, fire departments, snow removal costs, and the like–remains the same. That leaves fewer people behind to pay the bills. Third, young people are the most likely to move, people in their 20s and early 30s. The median age of people who move is 26.1 years. Thirty-four percent of people aged 20 - 24 move each year, 30 percent of those aged 25 - 29, and 21 percent of those aged 30 - 34. The age of the population in various regions of the country mirrors migration patterns. Thus, nine of 13 western states have median ages below the national average, as do 8 of the 17 southern states. The Northeast, where 7 of 9 states have above average median incomes, is the oldest region. And the Midwest is average.

Continued out-migration has left many counties with large numbers of elderly people behind. The elderly are past their peak production years. Their salaries may have plateaued. They may be retired. They may be living on social security. They may be suffering the scourges of age, declining health and impoverishment. Extensive out-migration often leaves serious economic problems behind.

But it isn't just economic problems. Where does the vim, vigor and vitality characteristic of youth come from? Where does the leadership come from? (Those who migrate also tend to be the better educated.) Schools have to consolidate in the wake of declining enrollments. Churches merge. Implement dealers, hospitals, car dealerships, bookstores, bus terminals, and medical offices close their doors because the area can no longer sustain them. School teachers retire and are not replaced. Department stores reduce the number of lines they carry. Theaters close. Filling stations stay open shorter hours. And try to find a boy to hire to mow the lawn, rake the leaves, and shovel snow!

Today, there are twenty-five counties with fewer than a thousand residents left. There are nearly three hundred counties with one to five thousand residents left. Sometimes more than a fourth of the residents left behind are old or very old. How can these counties scale down costs yet continue adequate fire and police and hospital and road maintenance services? Where do the revenues come from? Where does the leadership come from? Those are the problems that befall areas that lose population.

Consider also the implications of in-migration and rapid growth: demands for water supply, sewage disposal, police and fire protection, public transportation, hospital and educational services. The demands translate into jobs, and as young people arrive to take jobs, a long term economic cycle begins. Service needs are met. Young people begin to enjoy the good life–certainly compared to the depressed areas from which they moved. Young people, in turn, buy the services they need plus automobiles, homes, groceries, stereos, and leisure time activities. They marry, raise children, need hospitals and schools and police and fire protection, join clubs. You get the picture. In-migration can be an economic engine if properly managed.

Migration patterns affect career opportunities in two ways:

> Migration determines the kind and amount of goods and services areas need.
>
> Migration determines the kind and amount of resources areas have for providing goods and services.

It takes economic and human resources to generate goods and services, and it takes goods and services to attract resources. It's a catch twenty-two situation. If either dwindles, the system gets out of balance and can become unglued quickly.

Rural-Urban Changes. Mini-migration patterns also affect career opportunities. One of these patterns has been an exodus from central cities accompanied by migration to rural areas. In recent years several large metropolitan areas stopped growing. Eight of the twelve largest lost population. While the number of residents in cities of 100,000 or more rose less than 2 percent, the population of communities between 10,000 and 50,000 people increased more than 30 percent. The suburbs continued to grow, as did the counties surrounding large metropolitan areas.

Three migration trends are evident in all regions of the country:

> Metropolitan areas are gaining the most people.
>
> Suburban counties are gaining migrants.
>
> Central cities are losing people.

For many businesses it has become more economical to move the plant than to move the people. Today's suburbs, once bedroom hamlets owned by downtown commuters, are increasingly sprinkled with corporations. Each year from 1981 - 1985 developers built over 300 million square feet of office space, and most of it was in the suburbs. Today, people who live in the suburbs work in the suburbs. Commuting back to the central city is no longer the predominant pattern.

Urban Ruralites. Americans prefer the trappings of rural life, and they are moving back to the country. But "rural" and "country" no longer means "farms," "agriculture," or the simple life. Today's urban ruralites like the benefits of country living but not at a sacrifice of urban amenities. The days of the rough-and-ready pioneer, who felt crowded when he heard ax blows from his neighbor chopping wood, have been followed by the condo dweller who awakens to the alarm of his neighbor's security system or the blare of her TV set.

Incidentally, the urban ruralite is no longer as likely to have neighbors who are farmers. In 1940, 95 percent of farmers lived on the farm, i.e. on the land they worked. Today, about 20 percent commute to work. The same is true of farm workers. In 1940, fewer than a third lived away from the farm. Today, most, four out of five, live off the farm.

The career implication of the population move to rural America is that there is an expanding demand for metropolitan fringe services. The mini-migration patterns–even to the country!–translate into opportunities for jobs in municipal goods and services, especially transportation, public utilities, health, and education.

The Graying of America

The U. S. population will grow older over the next decade and beyond the year 2000. The composition of the population will also change. There will be fewer children and youth but many more middle-age Americans. The number of people aged 40 - 54 will increase to 60 million by the year 2000. And the number of older people will grow steadily until the year 2012 when the baby boom will drive up the number of retirees dramatically through the year 2029.

The same population dynamics described earlier will fuel these changes. The decrease at the low end of the age continuum is due to twenty years of low birth rates, the baby bust years, that followed the baby boom. The middle-age population bulge is the baby boom that followed World War II. And the increase in the numbers of the old and very old is due to the high birth rates that occurred before the Depression of the 1930s coupled with gains in medical science that have decreased mortality and increased longevity. Life expectancy for children born in the U. S. in 1988 was 74.9 years, 78.3 years for baby girls and 71.4 years for baby boys.

The graying America is also "golden." Increasingly, the elderly and retirees are wealthy, even very wealthy. They are the World War II GIs generation. They were prime beneficiaries of the 20-year economic expansion that followed the war. Unlike the Viet Nam cohort, society rewarded the WW II GIs with the GI Bill and low-interest, suburban-home loans from the FHA. They are the first generation to have attractive pension plans. They benefited from a generous cost-of-living escalator clause attached to their social security benefits. A federal law secured their private pensions. Many of them got in on the ground floor of the economic boom with investments in stocks, rental properties, and securities. Even during the economically difficult years of the 1970s and 1980s, their homes, investments, retirement plans and savings continued to appreciate handsomely. The end result is early and upscale retirements.

In 1970, 89 percent of men age 55 - 59 were in the labor force. Today, 78 percent is in the labor force. George Burns quips that he won't retire "because retired people play with their cuticles all day." As no generation before them, the current 50 - 64 year olds have that luxury.

Population change relates to the labor force in two ways. First, as the population changes, so does the labor force in terms of size, composition, and associated characteristics. Second, as the population changes, so also the demands for goods and services change. High birth rates are a boon to the textile industry and toy manufacturers whereas an aging population is more welcomed by pharmaceuticals and finance. Population and labor force changes are closely related.

But the labor force is not merely a mirror image of the population. It is driven by other than population factors, e.g., technology and social and economic polices. The next section examines changes in the labor force and workplace that affect career opportunities.

Labor Force Changes

Our sons and daughters will live in a different world. They will also work in a different labor force. A hundred years ago the Bureau of Labor Statistics began collecting information about American occupations and factors that affect the nation's workers. The following are snapshots of changes in the labor force and workplace that emerge.

Size and Productivity

The U.S. work force has been growing faster than the U.S. population (Table 1:2). The number of workers has been growing faster than the population because the proportion of the population that works is increasing (Table 1:3).

Table 1:2. Growth of the U.S. Labor Force by Year

Year	Number of Workers
1790	1 million
1860	10 million
1940	50 million
1980	100 million
1990	125 million (estimate)
2000	139 million (projected)

Table 1:3. Percent of the Population Working by Year

Year	Percent Working
1800s	30 to 35 percent
early 1900s	36 to 40 percent
1980	46 percent
1990	51 percent (estimated)

Thus, not only are there more people in the country, but more of those more people are working.

Here's how that happens. Suppose that a hundred years ago 1,000 people lived on the island of Neverland, and a third of them worked. That means there would have been 333 workers. Suppose, further, that the population of Neverland is twice as large today, and that half the population works. If the population doubled and only a third worked, there would be 666 workers. But if the population doubled and half worked, the labor force would number 1,000. That's what happened in the U. S. More of more people are working.

Projections

The labor force will increase to 140 million by the year 2000, an 11 percent increase during the last decade of the century. It will grow about 1.2 percent per year. That's a slowdown from the past decade during which the rate was 2.2 percent per year and the decade before that when it was faster. The last decade of this century will feature the slowest rate of labor force growth since the 1930s.

Technological innovations are decreasing labor demands while increasing productivity.

The Bureau predicts that employment will reach 133 million by the year 2000. Employment, too, will increase at only half the rate of the preceding decade. Although both the growth and employment rates will slow, opportunities will open up in many occupations and industries for workers who anticipate and prepare for them.

Technology, Productivity, and Opportunity. Since 1990 worker productivity has been increasing at the rate of 2 to 3 percent per year. Taken together, improvements in worker output add up to today's worker producing more than four times the hourly output of the worker at the turn of the century. Technological innovations are decreasing labor demands while increasing productivity.

Agriculture is a good example. At the turn of the century the number of workers on farms was increasing. Employment in agriculture peaked about seventy-five years ago at 11.5 million people. By 1920 the long-term decline in farm employment began. That decline continues. It has left fewer than three million persons, less than 3 percent of the labor force, working on farms today.

But the decline in the number of agricultural workers did not signal a reduction in productivity. In fact, agricultural production increased over the same time period. Increased yields were stimulated by improved fertilizers, new pesticides, improved seeds and feeds, larger and better designed equipment, and better farm management practices. Today, fewer workers are needed to produce more goods.

Service-Producing Industries

The history of farm employment is but one example of a major change in the labor force. Over the last fifty years there has been a big increase in service-producing industries. Service-producing industries, but not goods-producing industries, have accounted for nearly 80 percent of the growth in nonfarm employment. Between now and the year 2000, nearly all new jobs created in the U. S. will be in service-producing industries. Employment in manufacturing will remain stable.

State and local governments, the trades, health care, transportation and utilities, finance, insurance, and real estate are examples of service-producing industries that have grown most dramatically. More than two-thirds of people employed in nonfarm jobs work in service- producing industries. That's twice as many as work in all goods-producing industries combined.

Agriculture is not the only area that has experienced a decline in employment. Automated elevators made elevator operators nearly obsolete. The diesel locomotive outmoded railroad firemen. Office dictation equipment replaced stenographers. Automated switchboards replaced telephone operators. Computer spreadsheets replaced bookkeepers. The list goes on.

Technology and Robotics. Technological innovation also generates labor force expansion. Consider how computer-related occupations blossomed. Computer programmers were virtually unheard of before the 1960s, they doubled in number from 1970 to 1980, they continue in short supply today, and they demand premium wages in the marketplace. The same is true for machine repairmen.

Even more sophisticated is the introduction of robots to American industry. In summer 1983, for example, General Motors opened a $500 million plant in Wentzville, Missouri, equipped with 163 industrial robots. Since then the automobile industry alone has installed tens of thousands of robots that have displaced three to four times that many workers. As late as 1982 there were only 6,800 robots in operation but today, less than a decade later, the number exceeds 100,000.

Recently, I was privileged to walk through the Jordan Lumber Mill and the Liggett-Myers Tobacco Company cigarette factory. One thing that impressed me is that, today, planks and 2 X 4s are made in much the same way that cigarettes are made. In both factories I was amazed at how few workers there were. Computerized robots work there. Some estimates are that workers already permanently displaced by technological change may be as high as 40 percent.

But displacing workers is not the same as replacing them. The so-called robotics revolution is also creating jobs in robot manufacturing, support, engineering, and use. These jobs go to people who are prepared for them. The introduction of high technology into industry does not necessarily mean that unemployment rates will skyrocket, but it does mean that there will be changes in the kinds of work people do. Tomorrow's worker may not have to work harder but smarter.

Industry Trends

A basic distinction between occupations and industries is that occupations refer to what people do (their line of work in the workplace) whereas industries refer to what employers do (the broad field of activity in which employers are engaged). The occupation/industry distinction is another useful way to examine what is going on in the U. S. Economy.

Briefly stated, jobs in goods-producing industries have been declining, roughly, 1 percent per year whereas the number of jobs in service-producing industries has been rising about 5 percent per year. These trends have been in place for several years. Nothing dramatically new is happening, except for the cumulative effect. It is the case, however, that not all goods-producing industries are declining and not all service-producing industries are growing. More on this in a later chapter.

Employment in goods-producing jobs is shrinking, but employment in service producing jobs is opening up.

The trends over the past thirty years–back to 1969, a year of high employment–are clear. Since 1969 U. S. employment has grown more than 45 percent and 36 million jobs have been added to the labor force. Over that same period of time 1 million workers left manufacturing and were not replaced. The thirty-year result is that whereas manufacturing claimed 30 percent of all nonfarm employment in 1969, today that share is less than 20 percent. The number of manufacturing jobs grew, though manufacturing's share of total employment dropped. Over a recent 7 year period the number of workers in the U. S. increased by 11 million. Over the same period the number of manufacturing jobs dropped by 2 million. The point is that employment in goods-producing jobs is shrinking, but employment in service producing jobs is opening up.

Age of Workers

The workplace is changing. So are worker characteristics. Population characteristics will translate rather directly into changes in labor force features.

Population dynamics will change the age structure of the labor force during the 1990s. In 1973 young workers, those aged 16 - 24, comprised 23 percent of the labor force, almost a fourth of the total. Today, the fraction represented by young workers is less than 20 percent, and it will continue to decline as the years of the baby bust run its course until about 1995, when the number of young workers will increase as children of the baby boom enter the workplace. By the year 2000 young workers will comprise only 16 percent of the work force. The median age of the work force will increase from 35.3 years in 1986 to 38.9 years in the year 2000. This will still be lower than the post WW II peak of 40.6 years in 1962, but it will be substantially above the low of 34.6 years in 1980.

So also, the number of older workers, those aged 55 and above, will decline. In 1972 this group constituted 17 percent of the labor force. It will decline in number and size until the mid1990s. The number of older workers will not be substantially larger in the year 2000 (11 percent) than it is today (13 percent). Although the size of this population age group will increase, high rates of retirement at age 65 coupled with early retirements beginning as early as age 55 will decrease the size of this labor force group.

The decreases in the number of younger and older workers will be offset by the baby boom generation that will dominate both the age 25 - 54 work group and the labor force. This age group will grow 1.7 percent per year while the youth work force declines about .2 percent per year and the older work force grows about .2 percent per year. By the year 2000, prime-age workers, i.e. those ages 25 to 54, will account for 73 percent of the work force, up about 10 percent over 1986.

Women Workers

A revolutionary social change occurred after World War II. The number of women entering the labor force increased dramatically. A hundred years ago women composed no more than one in seven workers in the United States. The trend accelerated during World War II as women joined the assembly lines in defense plants. It continued after the war. The number of working women doubled in the twenty years from 1954 to 1974. Female workers comprised less than 40 percent of the labor force in 1970. Today, more than two of every five workers is female. By the year 2000 nearly half of the labor force, 47 percent, will be female. That's up from 45 percent in 1986 and 39 percent in 1972. The annual increase in women's participation in the labor force is .8 percent, which is half the rate of the last decade but double the anticipated rate for the labor force as a whole. Women are entering the labor force at rates more than twice as high as men.

There is another, more subtle change in women's participation in the work force. Women are working longer, i.e. more years. Today's male averages 39 years in the work force, which is virtually the same as it was a decade ago. But today's young woman can expect to spend 28 years of her life in the work force. That's an increase of five years over less than a decade. More women are working and they're working more years.

Working Mothers. Two hundred years ago the typical American married female was accurately described as a mother. Half of the nation's families had four or more children. But today's family averages fewer than two children, and usually the wife works. The typical mother works. Six million of the sixteen million working mothers have children at home who are under six years old.

Today's women are no longer "homebodies." They're working women. The "typical housewife" is an endangered species.

Women joining the labor force contributed 60 percent of the steep increase in employment over the past twenty years. Over the past decade the labor force has grown by about three million people per year, and two of the three million have been women. Today, over 50 percent of all women sixteen years old and older are employed. Today's women are no longer "homebodies." They're working women. The "typical housewife" is an endangered species.

Competition with Youth. The movement of women into the labor force affects our way of life in many ways, and because women's work behavior has been identified so closely with issues of equity and equality, the change is normally viewed as a triumph for the women's movement, which it may be. I would point out, however, that change is seldom either an unmixed blessing or curse, and in terms of employment opportunities for youth, the movement of women into the labor force has been a threat. Adult women, like young people, have been struggling to get jobs and to establish careers. As a result, young people not only have had to compete with each other, but in some cases they have also had to compete with older women. Who works in fast-food restaurants? Young people and older ladies.

Fortunately, the movement of women into the labor force, like the numbers of young people, will lessen over the decade, which should open up opportunities for everyone. The number of younger women available to work will decline as the baby boom generation passes through, and as younger working women interrupt their careers to raise families.

Minorities

By the year 2000 the U. S. Labor force will be more diverse racially and ethnically. More than a third of the anticipated growth in the labor force over the next decade will come from minority cultures. Blacks will contribute 18 percent of all new workers during the rest of the century, which will increase their fraction of the labor force from 11 to 12 percent. Hispanics will increase the most, both in terms of numbers and share of the labor force, from 7 to 10 percent of the labor force, a 74 percent increase. Hispanics will account for 29 percent of all new workers as the number of Hispanic workers grows by 4.1 percent per year till the year 2000. Asian Americans and smaller groups will increase from 3 to 4 percent of the labor force. The proportion of the labor force represented by the White majority culture will decline from its current 79 percent share to, approximately, 74 percent of the labor force. By the turn of the century, 22 of the 140 million people in the labor force will be nonWhite.

Education Levels

Increased worker productivity has been associated closely with increased educational levels in the nation's population. Dramatic changes have occurred over the past 120 years. In 1870, when the nation's population was less than fifty million, fewer than seven million people were enrolled in schools. Ninety-eight percent were in elementary school, one percent were in high school, and another 1 percent were in college. Today, sixty million people are enrolled in schools. A little more than half are in elementary school, about a fourth are in high school, and about a fifth are in college.

There have been changes, then, in the number of people and the proportion of the nation's population enrolled in school. There have also been changes in how long people stay in school and in their levels of educational attainment.

> One hundred years ago less than 1 person in 100 graduated from high school. Today, 85 of 100 (ages 25 to 29 years) graduate.
>
> One hundred years ago less than 1 person in 100 graduated from high school? Today, 22 out of 100 (ages 25 to 29 years) graduated from college.
>
> One hundred years ago only a thousand master's degrees were awarded annually and only one person in fifty thousand received one. Last year nearly 300,000 master's degrees were awarded, one for nearly every eight hundred people in the entire population.
>
> One hundred years ago fewer than a hundred doctorates were awarded annually. Last year 34,000 doctoral degrees were awarded, one for every seven thousand and five hundred people.

Young people are spending more time in school. Three decades ago 40 percent of the labor force had no high school education. Today, that figure is only 8 percent, and 40 percent has a high school diploma. Two decades ago 28 percent of workers (18 - 64 years old) had at least 1 year of college. Today 42 percent has at least one year of college. Five decades ago only one worker in sixteen graduated from college. Today, one in five has graduated.

Today's workers are better qualified than ever before. On average they bring better credentials, degrees and certificates, to the work place. A majority of all new jobs will require postsecondary education, and today's young people will have to keep pace if they want to be competitive. The best jobs with the highest incomes will go to those with the most education and training. That means that the best career preparation strategy is for young people to invest in themselves in the form of education and training.

Academic Surpluses. The rise in education and training levels of the American worker occurred in response to industry's increased demands for more highly trained and productive workers. As the baby boom moved through high school and on to college, colleges began to produce more graduates than were necessary to fill the available jobs. And as the baby boom passed through college and left empty classrooms behind, colleges reached out to previously neglected populations–older students, part-time students, females, minorities, and the handicapped–to keep enrollments and the number of graduates up. From a labor force point of view, these events and policies have produced a million surplus college graduates plus a fourth of the labor force is overeducated and underemployed.

To be sure, there are other reasons for going to college than to get a good job, as I discuss in a later chapter; but the mismatch between levels of educational credentials and available jobs is a continuing problem and a source of disillusionment for many.

A Dilemma. This poses a dilemma to society, parents and youth. On the one hand, the best jobs go to people with the best educations. On the other hand, the population is already overeducated as far as the general labor market is concerned. And no quick fix to the problem is in sight. So, will a college education pay in the 1990s? That issue is the subject of a later chapter.

Meanwhile, what do you do as a parent and young person? Consider the following:

> Don't go to college just to go to college, unless youth and parents can afford it. Understand the connection between the occupational goal and the career preparation possibilities available to get to that goal.
>
> Not only are there more occupations to choose from than ever before, there are also more ways to prepare for an occupation than ever before. College is only one way to prepare–a good way but not the only way. There has always been a demand for the most qualified workers. That means that workers have to beat the competition. If the competition is highly educated and trained, successful candidates will need that, plus more.
>
> The fastest growing areas of employment are the executive, managerial, professional, and technical fields. These require the highest levels of education and training. Getting an advanced degree is an excellent career preparation strategy.
>
> Areas of employment that will slow down are those that require little formal education–for example, unskilled laborers, machine operators, assemblers, helpers.

Be a "two-fisted warrior", a person with dual credentials, two sets of weapons. Society may have a surplus of lawyers, but if a candidate knows law and can speak Chinese or knows Russian history, he or she can practically name the salary, even in a tight labor market. Another language, computer skills, communication skills, or a degree in business are value-added credentials.

I'll speak more directly about career strategies in later chapters.

Parents and Change

One of the problems parents face in trying to help young people choose careers is that some of the old standbys, like farming for the boys and stenography for the girls, aren't where the action is anymore. Our sons and daughters live in a different world. Technological innovation and change is creating opportunities that didn't exist when we parents were thinking about careers, and you and I probably don't think about them when we consider career possibilities with our children.

Change is occurring. There are more people, more of the population is working, worker credentials are improving, productivity is increasing, and technology is changing the workplace. All contribute to more job competition, especially for the good jobs, and the need for career planners to be aware of areas of employment expansion and contraction.

Young people need help choosing careers. One way parents can help them is by gaining an understanding of the long-term trends at work in society, especially how population and labor force changes affect career opportunities. A liberal arts major, who went to school in France and then became a government secretary in Austria, is an example of a young person who feels her parents could have helped her more: "Maybe this is passing the buck, but I think my parents left my future pretty much up to me... a little more guidance or direction would have helped me define a better future for myself."

Two

How Society Processes Young People

Parents have the biggest influence on their son's and daughter's careers. That's the theme that ties this book together. In this chapter I examine that influence in more detail, what it is and how it happens. I show how society places families at different socioeconomic status levels. I illustrate how levels of education and training qualify people for occupations, and how occupations affect income. I outline how parents influence their children. I conclude with discussing gender and race, how whether one is a boy or girl and whether one is a member of the majority or a minority culture affects the career expectations others have for him or her and that young person's opportunities.

Society is a system. It "works". Society is a great big people processing machine. This is how it sorts young people into different careers.

The Social System

"All men are created equal," or are they? What about females? What about Blacks?

The notion that society is made up of equals who all have the same opportunities in life is more of a grade schooler's view than a mature understanding of the way society works. We do not live in a caste system that rigidly divides society into separate groups; nonetheless, inequalities exist among people and those inequalities are perpetuated from one generation to the next. Sons and daughters usually end up at about the same social status as their parents. Here's how that happens.

Socioeconomic Status

People are unequal already at birth. Differences in height, weight, gender, muscle power, and brain power are just a few examples. One kind of inequality is particularly important in understanding how careers develop: family-socioeconomic status.

Socioeconomic status refers to a combination of things that are closely related, namely, levels of education, occupation, and income–what people sometimes call "social class." Socioeconomic status is based primarily on occupation. Some occupations, like doctor and lawyer, have high status. Others have lower status. Unskilled laborer is an example. How society treats a person–i.e., what status it accords that person–depends largely on the person's occupation.

If you were to ask me what one piece of information I would want to know about a person that would tell me more about that person than anything else, I would say: Tell me that person's occupation. If I knew only the person's occupation, then I would have a good idea of a lot of other things about that person.

Suppose, for example, that you told me that a person was a dentist. I could infer that the person was well educated and was probably well-off financially. Wouldn't you? Knowing that the person is well educated, has a high-status occupation, and enjoys a good income (i.e., is an upper-class person), I could conclude a number of other things: That the person probably drives an upscale automobile instead of a pickup truck; lives in the suburbs rather than the slums; spends more time on tennis courts than in pool halls; enjoys more fine wines than cold beers; more designer jeans than coveralls; is more likely to be seen at the symphony than the race track, and a lot more. Get the picture? If you know a person's occupation, you really know quite a bit about that person.

A person's status comes from his or her occupation. There once was a man named Ronald Reagan. Hardly a day passed without seeing him on TV or hearing what he had to say about "whatever." Then one day he left his job. Now, nobody pays much attention to him. What a difference a day makes. What a difference the occupation makes. Occupations are central to how we think about ourselves and what others think of us. Ever notice that when introductions are made, the first thing mentioned is a person's name, and what's the second thing? Probably occupation.

Occupational Prestige. Occupational-prestige scales measure how the public ranks a particular occupation. Table 2:1 shows some examples from a scale that ranks occupations from 1 to 100, like a thermometer.

Table 2:1. Occupational Prestige Thermometer

Occupation	Prestige Score
Dentist	96
Airplane Pilot	79
Electrician	44
Gasoline Service Station Attendant	33
Plasterer	25
Shoe Repairer	12

People give more prestige to some occupations than to others. How much prestige the occupation has determines the social status of the person in the occupation. Thus, occupational prestige is a convenient way to measure social status.

If you compare parents social status with that of their children, a definite pattern emerges. Children usually end up in occupations that are at about the same level of occupational prestige as their parents; and because their occupational-prestige levels are similar, parents and their children have comparable socioeconomic status.

That doesn't mean that children necessarily do the same kind of work as their parents, though they might. The Carry family of sports broadcasters is an example of those who do. Harry Carry was the voice of the Chicago Cubs. Son, Skip Carry, became the voice of the Atlanta Braves and Hawks. More recently, grandson Chip Carry became a sports broadcaster in Orlando–three generations of sports broadcasters. But that's unusual. Usually parents' and children's occupational choices are less identical though at comparable prestige levels. Children tend to enter lines of work with prestige that is roughly comparable to the work their parents do.

It isn't that children can't break out of the pattern, but they don't. And they don't want to for reasons that will become clear. If children want to change the pattern–say, they come from a family of migrant workers (low-occupational prestige) and want to become a Supreme Court justice (high-occupational prestige)–they find that to be a very difficult change. Levels of family-socioeconomic status remain remarkably similar from one generation to the next. Let's examine "why."

How the Social System Works

Why does the doctor's daughter become a college professor or a lawyer but not a restaurant cook? Why does the truck driver's son become a mechanic but not a pharmacist? It doesn't happen by accident.

There are connections between parents' and children's occupational prestige and, therefore, their socioeconomic statuses. The most important connection is the education and training that parents give their children. By education I mean formal programs of instruction that emphasize the development of knowledge and critical thinking. By training I mean programs of instruction that emphasize skills and vocational preparation. Levels of education are usually identified by degrees. Completion of training programs is often signaled by certificates. Education and training are the main connection to who gets into what occupations.

Education/Training and Occupational Prestige. High levels of education prepare people for high-prestige occupations whereas low levels of education and training leave them with low-prestige occupations. Consider the professions as an example. Doctors, dentists, and attorneys go through college and then take additional professional schooling. They are at the top end of the educational scale. They get the high-prestige occupations. By comparison, people with low levels of education and training qualify for low-prestige occupations.

Employers use degrees and certificates to sort out prospective workers.

We live in a credentialing society. That means that employers use degrees and certificates to sort out prospective workers. Education and training institutions brand people when they award them degrees and certificates. Institutions stamp them like the butcher stamps meat in the supermarket with labels like "choice" or "prime." To press the analogy, employers are like supermarket customers who shop for a particular quality of product. Not every customer wants or needs or can afford the top grade, and not every employer wants or needs or can afford the top-of-the-line product supplied by educational and training institutions. Degrees and certificates "grade" the products (prospective workers) so the customer (employers) can buy (hire) what they're looking for.

Schools and training institutions are society's biggest and most efficient job brokers. They are in the business of preparing workers and sorting them out for the labor market. The degrees and certificates they award become the shorthand labels that employers use to match people with jobs.

Education/Training, Occupational Prestige and Income. Society converts levels of education and training into levels of occupational prestige, but where does income fit into the picture? Clearly, levels of income are tied to levels of occupational prestige. High-prestige occupations, like the professions, pay the most whereas low-prestige occupations, like unskilled laborer, pay the least.

Levels of education and training determine the levels of occupational prestige people qualify for, and their levels of occupational prestige determine their incomes.

What emerges, then, is a picture of the way society works. Levels of education and training determine the levels of occupational prestige people qualify for, and their levels of occupational prestige determine their incomes (Figure 2:1). People with higher levels of education and training qualify for the better jobs, which also pay better. Or, to think of the process in reverse: How do you get a better paying job? You get a higher income by getting a better job, i.e., a more prestigious job. And how do you get a better job? By getting the necessary credentials, i.e., degrees and certificates that come with additional education and training. Indeed, many of the best jobs require that the person be licensed or certified or pass an exam like the bar exam; and for all practical purposes the only way a person can do that is through formal education or training.

Levels of family-socioeconomic status remain relatively constant from one generation to the next because parents encourage their children to get about the same levels of education and training or somewhat more than their own. Which parents want their children to enter professional schools? Typically, it's the professional people. Which parents are less concerned with their children's education? Usually, it's the parents who have less education. Thus, education and training is the main connection that produces the pattern between the parents' and childrens' levels of social status.

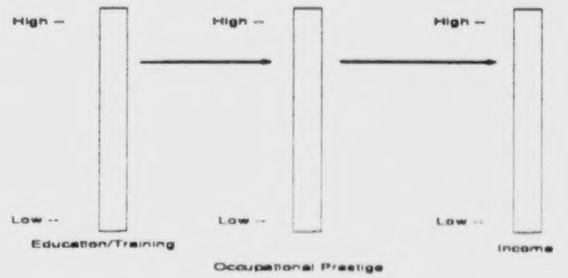


Figure 2:1. How level of education/training affects level of occupational prestige, and how level of occupational prestige affects level of income

This is an important bit of information because it holds the key to how parents can improve the career opportunities of their children, if they are so inclined. The most assured way children can improve their career opportunities is to gain the necessary credentials that qualify them for higher-prestige occupations. Education and training provides those credentials. That's the way the social system works.

Influence Processes

Parents are central to the influence process, but they're not the only ones involved. Young people are like rocks in a rock polisher. All kinds of people grind away at them, and parents will agree that the younger generation does plenty of grinding back. Parents are the big rocks in the tumbler. Parents have the biggest influence.

But there are other rocks in there too–some rough, some smooth, some large, and some small. The other rocks are relatives, brothers and sisters, neighbors, teachers, and friends.

The tumbler keeps on turning, year after year. Maybe it doesn't turn very fast, just keeps grinding, but the job gets done. Young people's attitudes and behaviors are shaped by the people around them. Take the rocks out of the rock polisher and the polishing stops.

What happens as people bump and grind against each other? Three different processes go on. Let's look at how parents influence their children.

Rewards and Punishments

When children are very young, parents use rewards and punishments to mold their behavior. Consider the potty-training stage. After months of changing diapers, dad and mom will do anything to get the little heavenly blessing to do the right thing at the right place at the right time. What usually works best is some kind of reward, perhaps M & Ms. In the early years parents modify children's behavior in much the same way that people train animals.

When they were younger I took my children to the state fair. One of the things we saw were "smart" chickens. There the first chicken stood, totally bored, in a glass cage. But when I dropped a quarter into the slot, a bell rang, and the chicken perked up and did a lively one-legged dance. After hopping a certain number of times–it probably cost me a penny per hop!–the chicken quit and was promptly rewarded with three or four kernels of corn that automatically dropped into its feeder. The chicken in the next cage had a different specialty, rolling over like a trained dog. The next one "sang." And the last one played tic-tac-toe.

How did these country chickens make the big-time entertainment world? Simple. A trainer rewarded them when they did the right thing. It's the old M & M trick.

It works with people, too. Even adults reward and punish each other. They're just a little more subtle about it. Say things others like and they reward with a smile. Say things they don't like and they punish with a frown.

Parents influence their children's ideas about careers at an early age by nods of approval or hints of disapproval. When a six-year-old daughter announces, "When I get big I'm going to race motorcycles," what does mother say? "Grandpa would like that?" Or does mother say, "But you'll get grasshoppers stuck in your teeth." The first reaction rewards. The second punishes. Parents use rewards and punishments especially when children are young.

Teaching and Reasoning

As youngsters grow older, parents try to reason with them. Instead of denying them a treat when they don't make their beds (punishment), parents talk to them. Parents try to reason. If the adolescent still wants to race motorcycles for a living, parents ask whether she has ever thought of making films about motorcycle racers. Parents begin to teach their children what is a "good job."

Parents know most about the kind of work they do themselves, and unconsciously they teach their children most about their own line of work and the life-style that goes with it. When my youngest son asked, "Dad, what's in your briefcase?" I could show him. But I couldn't show him what a helicopter pilot carries in his. I could show him my office, the computer, the telephone, the file cabinets, and the books; but I couldn't show him a shrimp boat. And I really don't know very much about lobster fishing off the Maine coast. Children learn most about the work their parents do and about similar kinds of occupations. That's why children often follow the same or a line of work closely related to their parents.

As children mature, parents use more words and fewer actions. They give compliments instead of M & Ms. They offer criticism instead of sending children off to bed as punishment. In both cases they get across the message of what they expect, their ideas about what is good and what is bad, their attitudes and their values. As children mature, parents do more by teaching and reasoning.

Examples

Parents also influence by examples. Children copy adults. Sometimes their imitations are harmless and amusing–little girls in mother's high heels strutting with all the poise of a Kentucky mule. And sometimes imitations are tragic. More than one little boy has fingered the trigger of a loaded gun or pulled an automatic transmission into gear "just like Dad."

Most learning by example is less spectacular. It involves picking up parents' gestures, using parents' language, observing parental pastimes, and acting like mom or dad. Most parents see a part of themselves in their children, in the way they walk or the way they talk.

Like rocks in the rock polisher, young people brush and bump against others who smooth out their rough edges and polish their surfaces. Young people aren't exactly marshmallows in the whole process. Dads and moms take their own share of bumps and bruises along the way. They're in the mix together with sons and daughters. Consciously or not, parents grind away with their young people from early on. Young people are the result of a lot of tumbles others take with them. When it comes to formulating career plans, parents are basic to the mix. They influence by using rewards and punishments, teaching and reasoning, and by being examples. When it comes to career choices, parents influence them more than anyone else.

A carpenter's daughter who graduated from high school, married a truck driver for a logging company, and worked herself up from being a receptionist in a beauty shop to a bank teller in a small town put it this way: "I feel that what I learned from my family and on my own helped me as much as anything I got from high school classes. In fact, it helped me much more."

Gender and Race in the Workplace

Does the social system process everyone in the same way, or might the social system work better for some groups than for others? The answer is "no," the system doesn't process everyone in the same way. The answer is "yes," the system works better for some groups than for others. The social system discriminates. That raises a fundamental problem in a society that deeply believes that everybody should be treated equally, that everybody should have the same chance. It's what the civil rights era was all about. It's what the women's movement is all about.

Discrimination: What Is It?

The social system "works". It processes people. But it doesn't always work the way it is supposed to work. The way the social system is "supposed" to work is deeply ingrained in our values and social consciousness:

> People "should" have equal access to education and training.
>
> People at the same levels of education and training "should" have equal access to occupations.
>
> People in the same occupations "should" be paid the same.

But the social system doesn't work that way for women, and it doesn't work that way for racial minorities.

What's wrong with the system? Where does it break down? Both the system and some of our most precious social values have to do with education, occupation, and income. Discrimination means that the system breaks down on each of these. Society discriminates by, first, denying equal access to education. Remember the civil rights era: Eisenhower and the national guard, George Wallace and the confrontation on the steps of the University of Alabama? The issue, which was played out in less dramatic scenarios all over the country, was whether Blacks were entitled to equality in admissions policies.

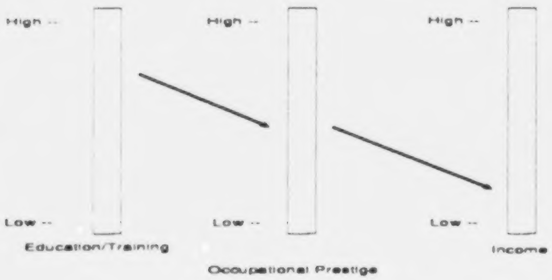
Until the last decade when, for the first time, the number of females exceeded the number of males on college campuses, society discriminated against females, too, only more subtly. When Blacks and females were admitted to institutions of higher learning, the institutions didn't process them as efficiently with the result that they didn't achieve the same levels of education as did White males.

But the problem goes beyond discrimination in education. After females and Blacks gained admittance and increased their levels of education, they ran into roadblocks in the labor force. Employers haven't allowed females and Blacks to convert their educational and training credentials into the same levels of occupational prestige that are available to White males. Females and Blacks get fewer jobs and they get poorer jobs.

Discrimination runs even deeper. Once females and Blacks get jobs, they get paid less. That's what the 70 cent female pay dollar is all about.

Discrimination means that the social system doesn't allow certain groups to gain full access and get the full benefit of the way education, occupations, and income are supposed to fit together in our society (Figure 2:2). Discrimination blocks females and Blacks at critical career junctures. In the following sections I examine the special cases of females and Blacks in more detail.

Figure 2:2. How discrimination affects the relationships between levels of education/training, occupational prestige, and income



Women and Work

At an early age, by the time they start school, two-thirds of little girls narrow their preferences to three occupations: teacher, nurse, or secretary. Their early aspirations are remarkably similar to the occupations women eventually take. Women take employment in fewer occupations than men, and they tend to end up in the lower-level, poorer-paying jobs, the female ghetto.

Why this happens is a controversial and emotionally charged topic that cannot be resolved here. The main arguments include biological, structural, and social learning explanations, and each of these has numerous variations. The biological argument reasons that gender-specific differences in personality are fixed at conception, and that sex differences in occupational preferences are an expression of those innate biological determinants. The social learning explanation argues that people learn and acquire occupational preferences from others who, knowingly or unknowingly, teach what society defines as "appropriate" roles for males and females to aspire to and achieve. Structural explanations focus on discriminatory economic, political, and legal practices that deny equal opportunities to women in the work place.

A young woman's career opportunities are affected by the attitudes and behaviors that others expect and that females learn and bring to the work place.

From a parent's point of view it is most useful to think of female careers from a social learning perspective. This is not to deny that sex differences are apparent already at an early age–that girls, for example, are more verbal and boys more aggressive–and that these differences may be biologically based. Nor is it to deny that the occupational structure, reinforced by economic, political, and legal practices, disadvantages women. But gender is fixed at conception, and the social system is beyond anyone's immediate control. Parents may not be able to do very much about these, however important it may be to remedy the system. But parents can do something about the more immediate learning environment in which their daughters grow up. A young woman's career opportunities are affected by the attitudes and behaviors that others expect and that females learn and bring to the work place. Of people youth interact with, none are more important than family and school.

I have emphasized two themes in explaining the career development process, namely, that children normally end up at about the same occupational prestige levels as their parents, and that education/training is the main linkage by which this occurs. If women are exceptions to the patterns, and they are, then we need to ask what it is about the way families and schools treat females that narrows their options and depresses their achievements. Unfortunately, the traditional way little girls have been reared tends to reinforce the discrimination that occurs in the social structure.

Family Influences on Female Careers

The family has the first, the most sustained, and the most enduring influence on newborn infants. The child lives with family for a third of its life, and even after the child leaves home, family influence continues.

A baby's sex is the first characteristic that family, friends, relatives, and community take into account. Before birth there is speculation, "boy or girl?," and there is discussion about what the baby "really should be." Birth announcements invariably include the first thing ever said about the baby: "It's a boy!" or "It's a girl!" From day one gender is central to who we are, how others behave toward us, and how we learn to think about ourselves.

How much expectations are based on gender is evident in the way parents describe day-old infants. Parents describe females as smaller, softer, more finely featured, prettier, and more attentive than they describe males. Similarly, parents overestimate male children in terms of strength, features, boldness, and coordination. Gifts for little girls are made of delicate fabrics in pastel colors with floral designs. Gifts for little boys are made of courser fabrics in primary colors featuring bright animals and machines.

Parents behave differently toward little girls and little boys. Mothers look at, stay closer to, and talk more to little girls than to little boys. In playing with them, parents are more likely to throw a ball beyond a child's reach and encourage the child to retrieve it if the child is a boy. This is but one example of subtle ways that higher levels of independence and achievement expectations are placed on little boys. By comparison, little girls are treated more protectively and are put under tighter restrictions and controls. Parents, families, and friends treat little boys and girls differently. They expect and reward nurturance and supportiveness in females but assertiveness and dominance in males.

Not only do others treat little boys and girls differently, but little boys and girls behave differently. Girls are more verbal than boys and boys are more aggressive than girls. Girls talk earlier and speak more frequently. When preschool children are asked to make paper and pencil drawings, over half of the girls but only one of six or seven boys sketch pictures of people. Boys draw cars, trucks, and trains. When preschoolers tell stories, more girls than boys tell stories about people. Boys are more likely than girls to tell stories about dump trucks, airplanes, and rockets. By age two, boys are more aggressive, more likely to yell, shove, and hit with intention to injure. And as boys and girls grow older, the difference in aggressiveness increases.

So, why do little boys and girls behave differently? The biological point of view argues that these are expressions of basic male and female traits, but that isn't much help to parents who are trying to help daughters choose careers. More useful to parents is the point that children develop along the lines that parents reward and punish them. Child-rearing patterns are important because they encourage autonomy and independence, on the one hand, but passivity and dependence on the other–attitudes and behaviors that influence occupational choice and achievement later in life.

School Effects on Female Careers

Schools, too, are important in career development; and schools, like parents and families, educate males and females in ways that produce different outcomes.

There are notable parallels between the ways schools and occupations separate males and females. One of the most visible ways schools separate students is by classifying them on the basis of gender. At the nursery and kindergarten level there may be separate toys, separate chores to do, separate teams to play on, and occasionally separate assignments. At the elementary level the playground may be organized into boy and girl territories: the boys' turf is the athletic field and the girls control the hopscotch grid on the sidewalk. Do these divisions make sense in a society that values equality, or do they suggest to young people that gender is an important division and that gender is an acceptable basis for discrimination within society?

> ***Opportunity differences translate into differences in what young men and women aspire to, what they develop their abilities in, and whether they receive public recognition and support for their efforts.***

If classifying students by gender were accompanied by "separate but equal" opportunities and outcomes, the consequences would be less discriminatory. But there is evidence that school opportunities and outcomes have been "separate and not equal." Athletic programs including coaching staffs, stadiums and courts, uniforms, and community support have histories of focusing on male activities. Opportunity differences translate into differences in what young men and women aspire to, what they develop their abilities in, and whether they receive public recognition and support for their efforts.

Separation of students along male-female lines may be most visible in the extracurriculum, but the same division affects the curriculum. Traditionally, vocational preparation programs have been male oriented. It has prepared males for technical jobs and industrial trades that pay better. What has been offered to young women has been preparation for retail trades, health fields and homemaking, occupations on the lower end of the wage scale.

The most blatant discrimination may occur in college-preparatory programs, where mathematics and science sequences have been "male subjects." By seventh and eighth grade females score lower on standardized tests in math and sciences. In high school females who have difficulty drop out of the sequences with the consent of teachers, counselors, and parents. It is not surprising, then, that fewer females than males enter college with strong backgrounds in high school math.

Most females never catch up, and that effectively disqualifies them from college majors in business, medical, scientific, and technical studies. As a result, twice as many men as women enter business and the physical sciences, and many times more men than women enter engineering fields, the higher prestige and better paying jobs. Women, by comparison, gravitate to education, health fields, and the humanities, lower prestige and lower paying occupations in which the majority of workers are other females.

Until the last decade fewer females than males enrolled in college, a certain predictor that their occupational achievement levels and earnings would be lower than males. In 1976 men and women accounted for 53 and 47 percent, respectively, of enrollments in higher education, but by 1986 the distribution was exactly opposite, 53 percent female and 47 percent male. Women's earnings rose 84 percent compared with a 64 percent increase for men over roughly the same period. Currently, median weekly earnings for women are 70 percent those of men, which is well above the 62 percent of men's wages women earned in 1979. The recent gains in occupations and incomes that females have achieved are closely tied to their increased levels of education and training. They earned it.

Female Traits and the Workplace

Differences in male and female child-rearing practices affect men's and women's attitudes and behaviors in the family, school, and world of work. As children mature, dependency is allowed if not expected of females, but it is rejected as an inappropriate trait for males. As a result, girls depend on their families for support and affection longer than boys. Compared with the more independent males, females develop a greater need for affiliation with others and for their approval. Females also develop more fear of rejection.

The recent gains in occupations and incomes that females have achieved are closely tied to their increased levels of education and training. They earned it.

Young women learn to anticipate and respond to the needs and wishes of others, to be nurturant, caring, and giving. These characteristics suit them well for traditional female jobs, but the same qualities equip them poorly for occupations that require decision making, independent judgment, and leadership, the higher prestige and better paying jobs. The traditional female traits–deference, nurturance, and empathy–do not characterize the male-dominated work place. Thus, it has become commonplace for females to learn "assertiveness training;" but how often have you heard of training programs for males to learn the more characteristically feminine values and skills?

One of our thirty-year-old study participants wanted to become a carpenter and attended apprenticeship carpenter courses while she held her job as a typist for the federal government. This is how she described the conflicts she faced: "Adjusting to a 'man's' world has been a terrific problem. When I was in school I was raised to think that a woman's place was in the home or in the office as a secretary. My thinking is now 180 degrees from that. I'm in a blue-collar job traditionally held by men, and it is rough. I wish I had been raised to think that I'm equal to a man and can do a "man's" job, and that there is nothing wrong with not wanting to get married."

Nowhere is this twist in society's reaction to traditional feminine values and skills more apparent than in the nation's schools. In grade school, high school, and even in college, girls are the "good students." At every level, girls get better grades than boys. Girls do a better job of adapting to school rules and classroom routines. Particularly at the elementary level, but also beyond, the traditional ladylike traits of neatness, politeness, and silence are welcomed and rewarded. Being feminine and student are highly compatible roles.

Yet the "good student"–passive, anxious to please and win approval–may also be the person who is least willing to take initiative, take risks, and make mistakes. The passive and conforming feminine qualities that so closely parallel the classroom model are not the same qualities that give workers an advantage in the labor market.

Another inconsistency is that although females do better than males in school, their expectations and self-esteem are lower than males. Compared to males, females are less sure of their abilities, underestimate their possibilities, and overestimate their liabilities. In elementary school females perform better than males, yet they are less confident than males that they will be able to do college work. Females do better than males in high school, but they do not translate their school performance into the same levels of occupational aspirations as their male classmates. At the college level men with lower grades more often believe they can achieve a doctorate degree than women with higher grades. And among graduate students with similar grades, females more often than males aspire to junior college positions. Males more often than females aspire to university appointments.

Where the differences between male and female patterns of dependence, achievement, aspiration, and self-esteem come from will continue to be a subject of debate. Some argue that the differences are fixed in natural biological tendencies; and there is little question that the occupational structure, reinforced by economic, political, and legal practice, treats women differently than men. But between birth and employment there is a lengthy learning process that sorts little girls and little boys into "appropriate" roles. That sorting process teaches what society expects of them and how they should think of themselves and others. The process translates into the sex-typed educational and occupational aspirations young men and women have and their eventual achievements.

Women's Career Choice and Conflict

The traditional consensus on what are appropriate roles for young women is breaking down. How much is evident from the percentage of female seniors who want to be a full-time housewife at age thirty. The decline is especially pronounced among women who are not college bound. In 1976, 22 percent choose full-time housewife as their occupation at age thirty. Today, 3 percent of high school senior females who are not college bound want to be full-time housewives by age thirty.

Moreover, more young women are taking math and entering the sciences. More women are going to college. More women are working and more are entering "men's jobs." The occupational structure is changing, even if too slowly for some and too fast for others. The change means new opportunities for females, but it also signals new conflicts in how women balance their marriage and family roles and their work roles.

The conflicts are apparent in what thirty-year-old females told us. A four-year-college graduate with a major in home economics works as a statistical clerk in an insurance office. She is confused: "I was raised to believe that I would be a wife and mother as an adult. I have not married, nor do I have children.... I'm still not truly positive what my goals are or what is in the future." Another took two years of general science in college and now works as a manager for a trade contractor. One of her biggest problems has been "trying to convince parents and close friends that being a young woman didn't mean I had to be married by nineteen years of age and begin motherhood." A third took three years of college and now works as a hospital secretary. Her views are much more traditional: "The major problem was the conditioning at that time as to what was appropriate to do because of being male or female. Girls were not encouraged to seek careers, but to educate themselves enough to support the husband's education and back his career. Things are changing, but I strongly believe that really the only decision in a woman's life is who she marries."

Young women are resolving the conflicts in different ways. Today's young woman has opportunities, but the opportunities require that she make choices. Parents can help their daughters sort out their options. Parents can support and encourage them to follow the career that suits them best. Parents can introduce them rather than shield them from competitive environments.

The higher the level of education and training, the better are the prospects for employment in higher-prestige occupations. And the higher the prestige of the occupation, the higher is the income that is likely to follow.

If there is a single word of advice for young women thinking about a career, it is this: Remember how the social system works. Education and training is the key to successful employment. The higher the level of education and training, the better are the prospects for employment in higher-prestige occupations. And the higher the prestige of the occupation, the higher is the income that is likely to follow.

Why the Lady is a Champ

Several years ago I came across a review of champion women's tennis players. It described the exceptional talents of the big names in the women's game including Martina Navratilova, Chris Evert, and Billie Jean King. But athletic ability alone did not make them winners. The article also described the mental toughness and attitudes of players in the Women's Tennis Association who had won major tournaments.

What set apart the champs? The champions all exhibited a zeal for competitiveness and an insatiable need to achieve on the tennis court. Tracy Austin, a two-time U. S. Open Champion by the time she was 20 years old, said it was "the desire to win and knowing you can win." Ms. Austin was described as hungry for on-court confrontations. "Desire is the key," she said, "because without desire, you're not going to want to kill on each point..."

Traditionally, women more than men have lacked that hunger for hard-nosed competition. Pugnacity, aggressiveness and the killer instinct have been the antithesis of femininity. Tenacity is unladylike. Most women are taught to be passive, compliant, socially acceptable and supportive.

By comparison, society expects males to display competitiveness. Witness cocky college jocks! As I write this chapter Jack Nicklaus has been in town inspecting one of his golf courses that is about to open. A reporter asked whether people still resented his dethroning the king, Arnold Palmer, during the 1970s. "I'm sure they do," Nicklaus said. "I know they didn't like me beating him. But that's too damn bad. Winning is the name of the game."

Barbara Potter, who in her late teens decided to make a career of tennis, says she had to learn a combative spirit traditionally assumed to be an attribute of achievement-oriented males. "You have to go for it," says Potter: "The chances for success and personal gain are just so much greater if you grasp it by the scruff of the neck."

No one displays the killer instinct better than Navratilova. Those who follow women's tennis may remember when Martina was a confused and chronic underachiever. The record books have since enshrined her as a tennis immortal. What made the difference? "Attitude," says Navratilova. She learned to "take the pressure, be the one to beat."

What distinguishes the winners isn't athletic ability, which each certainly has in abundance, but attitude. Each has learned winning attitudes about herself and about the game. That's why the lady is a champ.

What Parents Can Do

Usually, I speak of "what parents can do" at the end of a chapter–indeed, at the end of a part of the book. This chapter is an exception. I will say something about what parents can do here and yet again before this chapter concludes because the issues of females and careers and racial minorities and careers warrant special attention.

Some years ago a national organization for young women asked me to formulate program recommendations that would help young women take a more active role in society. One of the recommendations I made was that the organization should teach young women a competitive attitude, and I suggested that the organization could accomplish this by emphasizing competitive sports, especially team sports.

One of the best ways parents can help their daughters prepare for the real world and the world of work is by encouraging their daughters to actively participate in organized sports programs.

Today's young women have opportunities to participate in organized competitive sports in high schools, municipal leagues, and youth organizations. In my judgment, one of the best ways parents can help their daughters prepare for the real world and the world of work is by encouraging their daughters to actively participate in organized sports programs.

I, personally, learned a lot from competitive sports–back in the caveman days, as my sons call them. I learned how to win and, more importantly, I learned how to lose. Sports competition taught me a lot about life: taught me about teamwork; taught me that both individual and collective goals were important, each in their own way; taught me that I could count on others but, also, that others counted on me; taught me that I wasn't going to win 'em all, but I didn't have to lose 'em all, either; taught me the difference between luck and skill, and which to count on when the going got tough; taught me discipline; taught me to concentrate; taught me the value of hard work and traning; taught me that the ball doesn't always bounce in my direction; taught me that somebody else wanted the ball every bit as badly as I did; and taught me the difference between a game and real life.

In more recent years I've learned some additional lessons. With sand wedge in hand I often ask myself: "Who got me into this mess?" I know the answer. I also know who is going to get me out.

There are a lot of lessons about life to be learned from competitive, team sports, and many of those lessons have to do with attitudes. Sports is an excellent schoolroom for learning winning attitudes, and I strongly encourage parents of young women to take advantage of those opportunities.

Racial Minorities and Work

Blacks and other racial minorities also suffer the consequences of discrimination. Society withholds them from full access to the benefits of the system. In the case of females I elaborated how family and school contribute to their disadvantage. Similar points could be made about minorities, but I wish to emphasize a different point here. I review how minorities are faring on the three basic socioeconomic dimensions: education, occupational prestige and income. Then I present disturbing evidence that the pace and process of minority advancement has slowed, even reversed. As with the case of females, I comment on what parents can do.

Minorities and Education

Earlier I noted the schooling disadvantages experienced by Blacks and Hispanics. At every level of education–high school completion, some college, or college graduation–the White majority culture posts significantly higher levels of educational achievement than do most minorities, including Blacks and Hispanics.

The discrepancies in school related performance are apparent before students ever set foot on a college campus. Those who graduate from college today took the SATs in high school in the mid-1980s. Roughly three times as many Blacks and twice as many Hispanics as Whites had scores below 400. The national average combined SAT score is 903, and scores of 900 are common minimal admissions criteria to colleges. The scores are important predictors of how well students do in college. Table 2:2 reports how the 1.05 million White, Black and Hispanic high school seniors that took the SATs in 1985 scored.

Table 2:2. Percent of White, Black and Hispanic High School Seniors Who Scored Below 400 On Verbal and Math Sections of the SAT in 1985

Students.	Verbal SAT % below 400	Math SAT % below 400
Whites	31%	22%
Blacks	73%	64%
Hispanics	59%	45%

Performance scores on SAT tests also portend what happens in society at large. In the late 1980s, among the population 25 years old and older, 1 of 5 Whites but only 1 of 9 Blacks and 1 of 12 Hispanics had a four-year college education. What, then, might we expect from these minorities in terms of occupational and income levels in the years ahead?

The dropout and graduation rates underscore the same point. In the high school sophomore year alone significant numbers of students drop out, and the number varies by race: 13 percent of White students, 17.2 percent of Blacks, and 19.2 percent of Hispanics. During the junior and senior high school years these rates continue to build until they issue in graduation rates of approximately 85 percent for Whites, 77 percent for Blacks, and 60 percent for Hispanics.

SAT scores, dropout rates and graduation rates from high school, and levels of educational achievement portend labor force experiences and income levels that will follow. That's how the social system works.

Minorities and Occupational Prestige

Given depressed levels of educational preparation and schooling achievement, one could only expect lower levels of occupational achievement to follow, and that is the case. About fifteen percent of the total population and the total labor force is minority. If minority workers were equally distributed across the labor force, then fifteen percent of workers in each occupational group would be minority workers.

But that is not the case. Minorities are overrepresented in the occupations that attract workers with lower levels of schooling including operatives, nonfarm laborers, and service workers; and minorities are underrepresented in occupations that require higher levels of schooling, such as professional and technical workers, managers and administrators, and salesworkers. White men, for example, are twice as likely to hold sales, managerial or professional positions as Black men. Minorities fit the predicted pattern. They bring less to the labor force by way of credentials which qualifies them for the lower-prestige occupations.

Racial minorities also suffer the brunt of discrimination. Whatever their level of schooling, society has not allowed racial minorities to convert their educational credentials into the same levels of occupational prestige as do White males. Finally, when minorities hold comparable-status occupations, they are not paid as much as their White coworkers (Figure 2:2).

Unemployment rates reinforce the picture (Table 2:3). As I write this chapter the unemployment rate for Whites is 4.6 percent, the unemployment rate for Hispanics is 9.3 percent, and unemployment for Blacks is 12.2 percent. Although the rates vary slightly from year to year, the pattern remains the same. Unemployment among Hispanics is twice as high as it is among Whites, and unemployment among Blacks is two and one-half times as high as it is among Whites.

Minorities and Income

The relationships between levels of education, occupational prestige, and income indicate how educational institutions, the labor force, and the economic system work together in ways that affect individual's achievements. If people are denied equal opportunity at one point in the sequence, they suffer diminished returns on everything that follows. In addition, if they are minorities, they not only suffer from initial disadvantages; they also get less return for their investments in education and work.

Table 2:3. Unemployment Rates of Whites, Hispanics, and Blacks by year, 1985 - 1988

Year	% White Unemployed	% Hispanic Unemployed	% Black Unemployed
1985	6.2	10.5	15.1
1986	6.0	10.6	14.5
1987	5.3	8.8	13.0
1988	4.6	9.3	12.2

Recent snapshots of the economic experience of minorities illustrate the point. In 1986, for example, nearly three times as many minorities as Whites had incomes below the poverty level–31.3 percent of Blacks and 27.3 percent of Hispanics. The median annual family income for Whites was $30,809; median family income for Hispanics was 65 percent of Whites, $19,995; and median family income of Blacks was 57 percent of Whites, $17,604. Since the size of minority families is larger than the size of White families, the actual dollars available per family member is even less in minority families than in White families.

In 1985, 23 percent of all American preschool children were members of families with incomes below the poverty level. For Whites the figure was 18 percent, for Hispanics it was 41 percent, and for Blacks it was 47 percent.

People with the best education and training credentials get the best jobs which, in turn, pay the best incomes.

Throughout this chapter and, indeed, throughout this book, I make two basic points. The first is the relationship between education/training, occupational prestige, and income. People with the best education and training credentials get the best jobs which, in turn, pay the best incomes. The second point is that although that's the way the system works, it doesn't work as well for gender and race minorities. The social system discriminates. It disadvantages females and minorities.

Knowing how the social system works is useful information. It may not be comforting to all because it isn't comforting to know that the social system doesn't treat everyone the same. But it does explain why some people don't fare as well as others. It also provides a strategy for people who want to improve their circumstances. The strategy is straightforward: To improve your earnings you have to improve the occupational prestige of your job, and to do that you have to improve your credentials–i.e., levels of education and training.

Recent Reversals

For the past quarter of a century our nation's social policies have been informed by the awareness that people need better jobs to improve their socioeconomic circumstances, and that the route to better jobs is through education and training credentials that qualify them for the better jobs and incomes. Real progress has been made toward the goal of full participation by minorities over the past twenty-five years.

There is, however, a disturbing trend that threatens the momentum of earlier minority progress. Over the past 10 years not only has the drive for equality in education, occupational prestige, and income stalled, but it has suffered reverses.

Education and Minorities. The picture is especially clear in the case of minority educational performance and achievement, especially at the college level. From 1977 to 1987 high school Black students who took the SAT increased their verbal scores by 21 points and their math scores by 20 points. Over the period scores for White students rose just one point on the verbal tests and remained constant on the math tests. Also, minority high school graduation rates improved notably. Whereas only 60 percent of Blacks aged 18 to 24 graduated from high school in 1970, the figure rose to 76 percent by 1985. From 1975 - 1985, the proportion of Blacks aged 18 to 21 who dropped out of high school declined from 27 to 17 percent.

Over roughly the same period, minority students' Scholastic Aptitude Tests (SAT) were rising. Between 1978 and 1988, the average scores of Black students rose 21 points on the verbal tests and 30 points on math tests. The average scores of Hispanic students rose 12 points on the verbal and 26 points on the math tests. By most indicators, minority students have never been better prepared for college.

But the minority experience in college is less than impressive. From 1970 through 1975 the percentage of White high school graduates who were 24 years old or younger and who were enrolled or had completed at least one year of college remained relatively constant at about 53 percent. Over the same period the rate for Blacks rose almost two percent per year, from 39 to 48 percent.

But just when it seemed that the Black enrollment rate would soon equal the White rate, the trend reversed. From 1975 - 1985, the rate for White enrollments climbed to an impressive 55 percent while the rate for Blacks dropped to 44 percent. The number of Blacks who received baccalaureate degrees declined six percent. By 1986 the rate of enrollments for Blacks returned to 47 percent which is below the rate for 1975. America's colleges and universities enrolled 32,000 fewer Black undergraduates in 1985 than in 1980, a decline of 8.9 percent. These declines occurred over the same period that Black high school graduation rates increased from 72 to 77 percent. Meanwhile, the rate of college attendance for Hispanic youth, 1975 - 1985, dropped from 51 to 47 percent. This decline in college attendance happened while Hispanic high school graduation rates increased from 55 to 60 percent.

Recent rates of minority college graduation are depressing. For example, in the mid-1980s 9 percent of all undergraduates were Blacks, but Blacks received only 6 percent of the baccalaureate degrees. Four percent of undergraduates were Hispanics, but Hispanics received only 3 percent of the baccalaureate degrees. By comparison, 80 percent of the undergraduates were White, and Whites received 85 percent of the baccalaureate degrees. Minority college graduation rates fall far short of the graduation rates for Whites.

Even smaller percentages of minorities go on to graduate and professional schools, and the percentage is on the decline. Thus, the number of Blacks who earned master's degrees declined 32 percent between 1976 and 1985. Hispanics posted a slight increase in the number of master's degrees conferred, though their share remained disproportionately low at 2.4 percent. In 1986 Blacks earned 820 research doctorates, which was 27 percent fewer than they had earned 10 years earlier. The number of doctorates earned by Black males dropped from 684 to 321, a 53 percent decline, whereas the number earned by Black females was 499, 15 percent higher than in 1977. Black women now earn more than 60 percent of all doctorates awarded to Blacks in the United States.

The number of doctorates earned by Hispanics increased dramatically from 396 to 677 over the same period, but the Hispanic percentage of the total number of doctorates awarded remained low (2.1 percent).

General Decline in Doctorates. The record would not be complete without documenting the experience of the White majority over, roughly, the same period of time. There is, in fact, a sustained and continuing decline in the proportion of doctorates earned in the U. S. by U. S. citizens. For example, in 1986, U. S. citizens received 72.3 percent of the 31,770 research doctorates, which was down from the 85.6 percent U. S. citizens received in 1962. The decline was especially marked among White males who earned 12,257 doctorates in 1986, 28 percent fewer than the 17,011 doctorates they earned 10 years earlier.

What has been occurring, then, over the last decade is a general decline across the population in the number and percentage of doctorates earned. Indeed, the Black experience is nearly identical to the White experience in the extent of decline in earned doctorates. However, several things are problematical about the Black decline in earned doctorates. First, Blacks had not yet achieved their fair share of doctorates relative to the total population before the decline set in. Second, Blacks had been enjoying dramatic increases in the number of doctorates earned before the decline. Third, the recent declines largely erased the gains that followed the civil rights era and the federal discrimination legislation of 1964.

To be sure, there are American minorities other than Blacks and Hispanics, just as their are clear cultural differences within the Black and Hispanic communities. Of all minorities the group that fared the worst from 1975 - 1985 was the American Indian. Only 55 percent of American Indians graduate from high school and only 17 percent enter college. So also, of all American minority groups only Asian Americans equaled or surpassed the enrollment rates of White students in higher education. Unfortunately, time and space do not allow me to discuss each of these smaller minorities, but I acknowledge that their experiences may differ from the majority-minority experience.

Minority Income. I have emphasized that educational achievement provides the credentials for employment in occupations that produce income. Given the turn around in the level of minority credentials, we would expect lower levels of occupational prestige, which is what happened; and with lower levels of occupational achievement, we would expect lower levels of income. Permit me to touch briefly on the decline in minority income levels to establish the relationships.

In the 1950s Black median family income was 54 percent of White's median family income levels. Black median family income levels rose to 61.5 percent of Whites by 1975, but then declined to 57.5 percent by 1985. Also, between 1973 and 1986 the average real annual earnings for Black males ages 20 to 24 fell 50 percent, $9,818 to $5,299. Over the same period Hispanic median family incomes also declined slightly. In 1975 Hispanic family income was 66.9 percent of White median family income. By 1985 Hispanic family income was down to 65.2 percent of White median family income.

In summary, in the quarter century since the mid-1960s minorities experienced dramatic gains on the basic socioeconomic dimensions of education, occupation and income. Unfortunately, that momentum has stalled, and the losses of the last decade have seriously eroded earlier gains.

What Parents Can Do

Suppose you are a minority parent and have a son or daughter contemplating a career. What can you do to assist their career planning in light of current trends?

Discrimination has no place in the system of American values, and it needs to be wiped out. But discrimination is here and it is real. It is a part of the social system in which we find ourselves, and it will probably affect our children in spite of our best efforts to achieve a fair and just society in our lifetime. A farmer's daughter, twice divorced, working as a waitress and supporting two teenagers, was candid: "Be more realistic," she urged. "Life is not a high school Debate Club where everyone follows the rules." Discrimination means that parents and minority youth are especially well advised to use their knowledge of the way the social system works to their advantage.

Employers use education and training credentials to sort prospective employees into appropriate occupations.

Society uses education and training programs to establish individuals' credentials. Employers use education and training credentials to sort prospective employees into appropriate occupations. People with higher education and training credentials qualify for the most prestigious occupations which, in turn, pay the best incomes. Although the social system does not reward females and racial minorities as handsomely as it rewards White males, the system still gives better jobs to candidates with better education and training credentials, and females and racial minorities in the better jobs are paid better than those with lessor credentials and poorer jobs.

Use your knowledge of how the system works to advantage. Parents of minority youth must challenge their sons and daughters to get the credentials that qualify them for the occupations that offer the incomes they desire. This is how the system works, and the most assured path to success is playing by the rules.

Three

Beliefs, Values and Attitudes Make a Difference

In the previous chapter I explained how the social system works: how education and training institutions prepare people for jobs that, in turn, generate income; how, through education and training, family socioeconomic status is perpetuated by children; and how the social system disadvantages women and racial minorities.

This chapter looks at career development from a different angle. It examines what goes on inside young people's heads. First I review beliefs, values and attitudes that young people learn that help or hinder their careers. Then I draw on my own research and review what young people say are the problems they faced in getting started on a career. The chapter ends Part 1 of the book with suggestions for what parents can do to help their children choose careers and with Part 1 of the Career Explorations Workbook.

What's Taught and What's Caught

There are patterns in levels of family socioeconomic status from one generation to the next. That happens because parents rear their children to be like they are. Education and training is the main connection between the generations, and other linkages reinforce the patterns. These involve how parents "bring up" their children. Not all child rearing is done consciously. Perhaps more is caught than taught.

Supermarket magazine racks, church pulpits, and PTA programs all voice concern about the influence parents have on their children. There are different opinions about how parents should parent, but on one point there is widespread agreement: How parents raise their children makes a difference in how the children turn out. The next section explores where parents get the values they teach their children.

Occupations Affect Values

Occupations differ in important ways, and some of the major differences depend on whether the occupation is high or low prestige. One of the main differences between high- and low-prestige occupations is how much a person works with people as opposed to things. Another is whether the occupation requires self-direction or conformity. Yet another is whether the occupation requires individual effort or group effort.

I cite examples to illustrate these differences. Actually, most parents and families are somewhere in between high and low status, so the picture I paint appears in broad-brushed strokes, not fine detail. Figuring out what influences young people is a sticky problem, and I oversimplify in order to focus on important differences in child rearing practices and how those differences influence a young person's career development.

The distinction between higher- and lower-status families is a useful way to think about differences in child-rearing strategies. The labels take into account that the values behind child rearing practices come from parents' work experiences. Work circumstances differ by occupations and they affect parents' values.

People vs. Things. High-prestige occupations usually involve dealing with people and ideas whereas low-prestige occupations more often involve dealing with things.

Here's an example. Insurance sales is a higher than average-prestige occupation, and people who sell insurance work with ideas like "security," "insurability," "estate planning," and "return on investment." A lower-prestige occupation, by comparison, may involve putting in sidewalks. The worker works with grass and gravel, concrete, hammers and shovels. Whereas higher-prestige occupations typically involve working with people and abstract concepts, lower-prestige occupations more often involve working with things.

Self-Direction vs. Conformity. Occupations also differ in the amount of self-direction they allow and expect of the worker. Insurance salespeople choose their clients and have flexibility about when and how to speak with them. No one is looking over the salesperson's shoulder constantly. It's not a routine job because every client represents a different challenge. The agent figures out ways to get the sales job done. To the extent that happens, the salesperson is a good employee.

Lower-prestige occupations usually present a different situation. A boss tells the worker what to do, how to do it, and when to do it. It's routine work. It doesn't take much planning and figuring. The worker who follows orders is the "good" employee.

Individual vs. Group. Higher-prestige occupations usually require much individual effort whereas lower-prestige occupations tend to require that people work together closely. The insurance salesperson figures out a strategy, calls on clients, writes up policy proposals, and reports back to the general agent. The salesperson has little supervision. The construction worker, by comparison, is often part of a crew. The crew travels to work together, puts up scaffolding together, and eats lunch under the same shade tree.

Different work conditions illustrate why higher-prestige occupations require higher levels of education. Education equips people to deal with abstract ideas and complex issues, to work smoothly with others, and to work independently. That's important in the higher-prestige occupations. But in lower-prestige occupations, level of education may have little to do with the job. What may be required is a strong back and a person who will do what he or she is told to do.

Values

Different jobs require different worker values. People in high-prestige occupations learn to value their freedom and pursue opportunities as they see them. By comparison, workers in low-prestige occupations learn to value conforming to authorities. After all, isn't the insurance salesperson rewarded for figuring things out and working independently? And isn't the laborer rewarded for doing what he or she is told to do?

"Self-direction" and "conformity" are values that are learned in two different work places. Both are practical strategies that work for the worker. These values, which are learned in the work place, become an important part of the work values parents teach their children. Parents in higher-prestige occupations tend to emphasize the importance of self-direction. Parents in lower-prestige occupations tend to stress conformity.

To be sure, life is more complicated than that and what parents value is a much more complex matter. Parents' values also come from how they were reared when they were children and from their own ideas about young people. But the biggest influence on parent values goes back to the parents' work circumstances. What works in the work place is different in higher- and lower-prestige occupations.

As children learn their parents' values, they adopt values that fit best with the same kinds of occupations their parents have. Thus, children who learn self-direction at home are better suited for jobs that require freedom and independence, whereas children who learn conformity are being taught to take orders in the work place and are learning attitudes and behaviors appropriate to lower-prestige jobs.

Life Chances

Higher-status families offer advantages to their children when it comes to career planning and preparation. They have the resources to provide opportunities for their young people to pursue their ambitions. Thus, approximately half of young people who go to college come from families whose parents earn $35,000 or more per year. In addition, higher-status families are often in a position to provide the psychological support that enables young people to take reasonable risks in starting their careers. Their young people can afford to start over if they fail.

Parents tend to relate to their children in much the same way that they themselves are treated at work.

The lower-status family situation is more tenuous. The resources aren't there to provide economic stability and an emotional safety net. Young people in lower-status families usually can't afford to take career risks. Overdue bills have to be paid. They have to be concerned with the here and the now. Thinking about the future is a luxury. Young people in lower-status families don't have the same opportunities and life chances as do their age-mates from higher-status families.

Parents tend to relate to their children in much the same way that they themselves are treated at work. Workers who deal with people have to be concerned about communication skills and interpersonal relations. Workers who are more accustomed to doing what they are told to do tend to be more coercive in relating to their children. In both cases parents teach their children what works for them in the work place, and their children learn to behave in ways appropriate to the same occupational levels their parents have.

Child Rearing Practices

There are differences in how parents relate to their children and discipline them. Higher-status parents are more likely than lower-status parents to treat their children as equals. They try to nurture warm and supportive relations with them. They are interested in why their children behave as they do. They are concerned about how other people interpret their children's behavior, and they try to pass on those sensitivities to their children.

Lower-status parents tend to be more concerned with their children's external behavior, with conformity, and attend less to "why" children behave as they do. Lower-status parents are more dominating, assertive, more demanding of obedience, and less permissive. Sensitivity for interpersonal feelings is not a job requirement in the typical lower-prestige occupation, and parents in those occupations are less likely to pick up interpersonal sensitivities and teach them to their children.

Higher-status parents are usually more verbal. They do more explaining and teaching. Mothers tend to give more exact instructions when dealing with their children. They point out to the child how the child's behavior differs from the directions they gave. By comparison, lower-status mothers use fewer words, communicate more by gesturing, and give fewer explanations. When they punish, lower-status parents do less by way of explaining why they punish.

How parents relate to their children has consequences for how children develop. Children who learn interpersonal sensitivities are developing skills for working with people, which prepares them to ease into higher-prestige occupations later. Children who learn to do what they're told to do are molded to later fill lower-prestige occupations.

How People Think the World Works. Is life fair? Is life a game of chance? Or would you say that life is a little of one and a lot of the other?

Some people think that if they plan, use their heads, and work hard, they can pretty much get what they want. Others feel that events are mainly a matter of luck. Studies show that people with higher status are more likely to believe that life is fair and that "they get what they've got coming." People with lower status tend to believe that what happens in life is more "a toss of the dice"–luck.

The most important lesson children learn early in life is what to think about themselves.

The same attitudes and behaviors appear when it comes to planning a career. Higher-status parents and young people do more career planning and do more preparing for careers than do lower-status parents and young people. The latter are more likely to believe that life is a matter of luck, so why worry about it? Parents pass their real life work experiences to their children and these become a part of what young people believe about themselves and the world around them, whether they think they can take charge of events or believe that circumstances control them.

Self-Concept. Perhaps the most important lesson children learn early in life is what to think about themselves. Some learn to think of themselves as people in control. Others learn to think of themselves more as bystanders or spectators in a chance game of life.

Whether children learn to think of themselves as people in control or pawns that others move around depends on many of the same parenting practices and family circumstances I described earlier. Parents who hold high expectations for their children, who communicate their expectations clearly, who explain when a young person deviates from those expectations, and parents who are supportive, are encouraging young people to evaluate themselves against set standards. These young people can see what progress they are making. By comparison, parents who are more coercive, who do less explaining, and who are more insistent on obedience and conformity convey a sense of powerlessness and unpredictability to their children.

Young people gain a sense of their "place" in society from interactions with other people. They learn what to think about themselves, their self-concepts, from others. Others teach them. If parents are supportive and nurturant, young people get the impression that others like them. They develop healthy self-concepts and gain self-confidence. These characteristics are less likely to develop under dominating family regimes. What young people think of themselves is important. Their self-concepts and self-confidence are major predictors of their long-term career outcomes.

Expectations. From early on children respond to the expectations others have for them, and they compare themselves and their performance with others. That doesn't mean that other's expectations are necessarily appropriate or even in the child's best interests. They may not be.

Some of the earliest and potentially most damaging inappropriate expectations and faulty comparisons may take place in schools where children are sorted into fast learners, so-so learners, and slow learners. If class files and school records are uncritically passed from one teacher to the next without teachers making independent and current student evaluations, then teachers' expectations may be passed on, too, from one year to the next. Children change over time and the expectations may be wrong. Expectations, both accurate and faulty expectations, make a difference in how children respond.

Researchers have done experiments in which teachers were given false past grade reports for students. When the bogus grades indicated that a child was a good student, the teacher had higher expectations and the student's classroom performance increased. When the teacher was given false information that the child was a poor student, the teacher had lower-expectations and the child's performance dropped off.

High expectations prompt young people to believe that "they can do it," but low expectations dampen their beliefs in themselves and in their own abilities. More is expected of some youngsters than of others, and what is expected of young people often differs by family social status. Others' expectations, not just young people's ability and interest levels, make a difference in their achievements.

Career Expectations. When it comes to planning and preparing for careers, what a young person wants is important; but what young people want reflects the expectations parents and other people have for them. Which young people want to go to college? Most often it's young people from higher-status families. Higher-status families have more resources, fewer children to compete for the resources, offer more parental support, and hold values and expectations that favor education. Their children have a better chance of "making it" than do their age-mates from families with fewer resources.

Young people tend to be influenced by as few as five to ten other people. As few as two or three others are particularly influential when it comes to career plans. Parents and peers, in that order, have the greatest influence on young people's career plans. Indeed, parents have more influence on a young person's career plans than do the young person's scholarly aptitude and school grades.

Young Adults Look Back

I've given you some snapshots of how what young people think and believe can make a difference in their lives as they finish high school and look toward the future. Now let's shift gears. Let's ask a different question: What can we learn from thirty-year-old young adults who have just gone through the experience of getting settled in a line of work? That's what this section is about.

The Career Development Study

Over the past several years I have directed a large-scale and long-term study of the career development of young people. The project includes a careful record of the occupational, educational, family, and military histories of nearly seven thousand young men and women who were first studied when they were juniors in high school. Thirteen years later we relocated those young men and women now scattered across the country and around the world, and we traced their detailed life histories since leaving high school.

They were thirty years old when we restudied them. They had finished high school and faced many of the same problems and questions that today's young people face. Should they go on to school or not? If so, where? And what should they study? Should they go to work? If so, where? And what would they do? The young men made decisions about military service. Both the young men and the young women made decisions about marriage and family. Should they marry? If so, when? If "yes," should they have children? How many? And when? Some had multiple marriages. One had already been divorced six times. Some were doing very well. Others got off to a bad start. Some went back to school. Many made career changes. We asked all of them to share their experiences with us.

We studied their occupational, educational, family, and military histories in detail. Then, at the end of the study we asked for their thoughts on two subjects. We asked:

> Would you...share with us what you feel are the major problems you encountered in your life since leaving high school?
>
> Given your experiences, what might be done in high schools to help young people prepare for the future?

Many of our respondents had deep feelings about these matters, and they weren't afraid to speak out.

Themes. One of the most prominent themes in the young adult responses had to do with their lack of preparation for work and careers. In identifying problems they experienced since leaving high school and suggesting what might be done to help today's young people prepare for the future, two-thirds–exactly 66 percent–offered criticisms or suggestions that had to do with careers.

I quote excerpts from what they wrote. The quotes demonstrate the diversity of experiences young people have after leaving high school and the interpretations they give for the problems they experience. What they told us also reveals the depth and intensity of feeling some young adults have about their lack of career preparation. The quotes don't tell us what all thirty-year-olds or, for that matter, what typical thirty-year-olds think. Indeed, the respondents do not always agree among themselves, and you and I may not agree with them. I make no effort to reconcile their opinions or pass judgment on whether they are right or wrong. I simply share with you what they told us, word for word. These are their opinions, not mine.

We asked participants to identify the "problems" they had and to suggest solutions. We intentionally asked "loaded" questions that focused their responses on the weaknesses in the system and how they would strengthen it. The participants responded from the viewpoint of workers who have just gone through the early career years and want to help today's young people get started on their own careers.

I arrange their comments under four general headings. The first illustrates the problems they reported when they faced the work world. The second concerns their high school experience. The third relates to problems and proposed solutions for a better fit between college and work. The fourth covers related topics.

This is what they told us.

Work World Culture Shock

The most frequent complaint the thirty-year-olds have is they weren't prepared to face the world of work. Their problems took different forms, but their lack of preparation for careers appeared and reappeared throughout their early careers.

Some admit, perhaps with embarrassment, that they didn't understand what working was all about. A doctor's daughter, college graduate, and mother of three, told us: "I honestly never realized...that the primary reason for working is to earn a living." Another, a computer equipment operator in government service, described herself as a "lost lamb," then added: "Looking back, I believe I got married in my senior year because I didn't know what else to do with myself."

Others had difficulty focusing on a career. A paper mill operator who wants to become an airplane pilot says he didn't know what field to go into, then added: "I never took the time to sit down and really think about my future seriously."

Many say that the biggest problem they faced as high school graduates was not knowing the major field of study they wanted to pursue in college. One mother of four–a ten-year-old, seven-year-old, five-year-old, and four-year-old–says it this way: "I had not received proper counseling. I didn't even know I needed it."

The problem with making a career choice isn't limited to the high school years. If not resolved, it can continue well into college and beyond. A university research assistant says: "My major problem was not having any definite plans about what I wanted to do, which isn't all that bad, but I still hadn't made up my mind by almost thirty. Had gone to college for four years and got a B.A. only because college was just the thing to do."

One of the most frequent complaints from high school and college graduates was that no one ever showed them the options. A medical secretary put it this way: "I never felt the need in high school to seek out vocational counseling...looking back, I wish I knew what training was required for various jobs, and even more basic, what jobs were available." A waitress in a hotel still wants to be an artist or an art teacher. She told us: "What I needed and did not get from high school was a clear overview of the employment situation." A college graduate with an A grade-point-average and now a receptionist in a doctor's office added: "High school prepared me to do well in college, but neither prepared me or showed me the opportunities for work...no one ever showed me the options."

In their own words the thirty-year-olds shared a common experience: They graduated from high school, maybe even college, and they felt lost. They didn't know their options. They married, they went on to college, they went to work, or they joined the military because they didn't know what else to do. They felt unprepared and poorly equipped to face the real work world.

High School

Rightly or wrongly, the thirty-year-old men and women often traced their major career problems to lack of preparation in high school. Their criticisms include declining academic standards, inappropriate courses, lack of aptitude and diagnostic testing, and deficiencies in career counseling programs.

Some of the sharpest criticism is leveled at the general high school experience. Here are two examples. A college graduate working as a government research worker says: "I do not remember anything significant from high school, no memorable learning experiences, not one teacher that took special interest in students. We were just all shuffled through the four years."

The son of a grocery store manager, who has a master's degree in personnel and labor relations, commented: "I was led to believe that if I went to college, the American dream would be mine and my life would be set. Most importantly, I thought I'd know what I wanted to do with my life. Well, here I am [age 30] and I still don't know and perhaps I never will. In that respect, I feel like high school did not prepare me."

"My standardized test scores in mathematics all through school indicated a real deficiency, but I learned tricks that got me through classes with respectable grades. I wish someone had looked at those test scores and said, 'Now here's a smart girl who ought to be doing better than this. Maybe some remedial work would help.' Instead, I was encouraged to avoid a career that involved math, advice which I was only too happy to follow."

Many young adults feel that high school programs should be oriented to the work world more directly. A lawyer's daughter who works as a secretary in business mentioned: "High school education should give students more insight into the working world and some experience with working skills so that they won't waste so many years trying to figure out what type of employment might be satisfying." Another said: "The diploma was nice to have, but it did not prepare me for the real world."

This woman speaks for many others. She is a school teacher's daughter, got straight A's in college, and has a master's degree. She feels that high schools must be more demanding: "My standardized test scores in mathematics all through school indicated a real deficiency, but I learned tricks that got me through classes with respectable grades. I wish someone had looked at those test scores and said, 'Now here's a smart girl who ought to be doing better than this. Maybe some remedial work would help.' Instead, I was encouraged to avoid a career that involved math, advice which I was only too happy to follow."

Others feel that high schools should do more testing. Some, like the woman just quoted, feel that the tests should reveal which students are having problems: "High schools need more testing of students early to pick up students having problems before it is too late. After seeing the reading abilities of many graduates, high school diplomas mean little nowadays."

A few seem to think that their problem was not understanding their own interests and abilities. They feel that high schools should give more aptitude tests and interest inventories. An air transportation administrator's daughter with a college degree suggests: "High school students should be given aptitude tests to show what preferences, assets, interests, and abilities they have and the types of work they may be best suited for."

Some of the most frequently voiced criticisms are directed at high school career counseling programs. An elementary school therapist who wants to be an airline stewardess told us: "I was just allowed to 'float along' without any direction, too immature to drift myself towards a goal." A homemaker who is married, has no children, and has never worked, made this observation: "My experience with counselors was not particularly rewarding or useful, not at all what I feel it could or should have been...some better counseling in high school could have prevented some wasted time." And a sales clerk in a department store says: "High school did not do very much to prepare me for coping with the problem of career decisions...better guidance at the crucial time could save a student from wasting years on futile jobs."

Several thirty-year-olds had the impression that high school counseling services are directed at the exceptional students and that average students are overlooked. A Vietnam veteran, who works as a printer while going to college, remarked: "I am very bitter about the lack of counseling for the "average" student. It seems that the people in the counseling positions spend all of their time with the extremely "bad" or "poor" student, and the extremely "good" or "smart" student."

A two-year-college graduate, who works full-time but wants to be a homemaker, said: "High schools need to give personalized counseling for more than just star students."

And a married elementary school teacher told us: "Because I was only a C student, I was overlooked in high school. I was neither given remedial assistance or any type of college prep. I was not regarded as having any potential...there is nothing (programs) available to directly motivate or assist the average student. I really see a need in this area."

Many young adults look back to the transition from school to work as a time when they were fumbling around and had little direction.

Finally, many thirty-year-old females were incensed at the lack of attention high schools gave to their career planning needs. One said: "High schools need to give more encouragement to women, scholastically and personally." A part-time waitress was angry: "A major problem was the lack of incentive given to female students...I distinctly remember an interview with a high school counselor during which I was encouraged to avoid the trades, instead to look at nursing, teaching, or secretarial work. No mention of management, administrative or any decision-making jobs!" Finally, a bookkeeper reflects some bitterness, too: "I am really angry that I was encouraged "not to waste time" with math...I feel my high school teachers didn't want to waste time helping me into a career, or they felt I wouldn't use it because I would get married and be a housewife. The only field they encouraged was typing and secretarial skills and possibly teaching."

Whether or not their criticisms are justified, many young adults look back to the transition from school to work as a time when they were fumbling around and had little direction. Some are angry–at high schools, teachers, counselors, and themselves. All would agree that society needs to do a better job preparing today's young people for careers.

College

Many of the young men and women we studied criticized colleges. Behind the criticisms are unmet expectations concerning preparation for the job market, standards of living after graduation, direct connections between college programs and fields of employment, and college as a career decision-making process. Other criticisms they make are that college education is stressed too much and that too many young people are pushed too early and too hard to attend college. Parents can learn from what they say.

Our study participants say that college is not a substitute for a conscious career choice. Many young adults told us they went on to college without a clear understanding of how education relates to work, and they later regretted it. A homemaker says: "I was not career oriented or thinking about what I would like to spend my life doing when I entered college...I wish I had had a better understanding of what my education was doing for me." A radio and television repairman expressed these thoughts as he looks back: "If I had known the possible practical applications of the subjects taught in school, I would have been much more interested in those subjects."

Other thirty year olds regret that they didn't attend college. A purchasing agent admits: "It took a long time for me to realize that I made working hard for myself by trying to bypass college." Similarly, an automobile mechanic concluded: "If I would have studied harder and went to college, I would not have to work with my hands all my life."

This mother of two didn't attend college, but she is convinced of the merits of a college education: "I tell my kids they should get a four-year degree. Then their choice of careers is much broader. If they still want to drive a truck, they can still do that and so many other things."

The same mother offers advice to parents, teachers, and counselors who try to help young people prepare for the future: "Encourage college to all students who are capable. Make sure they know all the ways financially they can be helped (i.e., grants, loans, scholarships)."

Not all the respondents were as certain about the merits of a college education. For example, a business service employee suddenly found himself in a whole new ball game after college: "Although I feel I was a success in school and was able to 'play the game' in an academic environment, I was totally unprepared to be a successful employee.... The rules of the 'game' in the working world were very different and were often unrelated to education and background." An air force officer's son who works as a computer systems analyst says: "The expectations I had upon graduation were smashed by the realities of a job market for which I was totally unprepared." And an airline stewardess missed "survival skills": "I certainly wasn't taught survival skills, such as apprenticeship for a trade, or anything preparing me, specifically, for any occupation."

A college prof argues that a college education no longer assures a higher standard of living: "I do find it frustrating that I hold the rank of assistant professor at a state university and still can't buy a house. So much for the American dream. The days when hardworking, well-educated people could be assured of a higher standard of living than their parents are long gone."

A school teacher and a registered nurse have the same complaint. The college programs they took were not a good fit with the employment situation they faced. The teacher said: "I now feel that if I'd known the facts about the saturated market and had been encouraged to pursue other career goals, I might have entered an entirely different field and found satisfying employment sooner." And the nurse said: "I chose a three-year nursing program instead of a four-year bachelor's degree program, not knowing until after I got into nursing school that the three-year programs were soon to be phased out. I wasn't made to realize that four-year nurses were the only ones who could do public health, supervise, etc."

Finally, several of our study participants feel that options other than college should be encouraged. A veterinarian told us what he thinks: "I do not feel that college is for everyone...technical schools and on-the-job training should be encouraged with the same social acceptance as college." A dental hygienist echoed the same theme: "I felt pressured to attend college after graduation from high school as my peers were doing...I feel college should not be made to seem so attractive, as the only means of becoming a success."

The opinions expressed about college as career preparation are varied, but two themes keep coming through. Some who did not attend college say that if they had it to do over again, they would definitely attend college. They think a college education has important career advantages. But others, people who did attend, feel differently. They point out that it is possible to enroll and graduate from college without having a career in mind, or to graduate without assurance that employment opportunities are waiting.

The problems young men and women run into as they make the transition from school to early careers echo the findings of other studies reported over more than a decade: Young people need and say they want more help choosing a career. Many hold high schools, colleges, and guidance counselors responsible for their problems. Their criticisms are wide ranging: impractical courses, deteriorating academic standards, lack of diagnostic testing, and too little career counseling, whether that be for students in general, average students, students in trouble, or females.

Related Themes

Not everything the young adults tell us is negative. Some of the thirty-year-olds show considerable sensitivity to the problems schools face and insight into their own real life experiences.

Some are sympathetic to the tremendous challenge guidance counselors face. The young woman who described herself as "only a 'C' student" and felt that she was overlooked in high school attributed the problem "to lack of guidance counselors and too many students." Similarly, a working mother offered this observation: "The real problem is they have too many students and what really is needed is more counselors."

"I could not go to anyone when I was younger and say: What the hell do I have to do to get into those areas?"

A lot of optimism also came through, even though we asked about "problems." Some mentioned where they got help. Parents and family were mentioned prominently. A librarian said: "My parents and family have more to do with my ability to deal with the world than school did." And a tax accountant told us his experience: "I am a tax accountant. One reason is my parents are too, and I was familiar with the job, knew how to get there. I am sure I would work in aviation or carpentry now if I had known more about how to enter those fields when I was younger. It's funny. They are hobbies now and they were then, and my knowledge is greater than the average person in those areas; but I could not go to anyone when I was younger and say: What the hell do I have to do to get into those areas?"

I conclude with a young woman's comments. What she said helped inspire this book. She works as a sales clerk in a department store. She said high schools need to do two things to help prepare young people for the future: "Better job guidance during the senior year; and helping students and parents together decide what future...the child should pursue."

These are examples of what thirty-year-olds say when they look back to the problems they had after leaving high school and suggest what should be done to correct them. Their real life experiences indicate what they are thinking and how deeply they feel about their experiences.

Today's young people express the same needs that young people before them expressed. They want more help choosing careers. Today's parents still have a choice, a choice that parents before them seem to have missed. Parents can try to help their children choose careers, or they can wait until their children are thirty-years old, then ask them to look back at the problems they had entering careers.

This book is for parents who want to look forward, not backward.

A Comment

Parents who have been around for a while recognize that trends in youth attitudes and behaviors come and go like other fashions. Here on my own campus at North Carolina State University, I've noticed some hairdos and Black leather jackets popping up that remind me of my grad student days at the University of Wisconsin in the 1960s. It's interesting to compare generations of young people and to assess how the current crop compares with earlier ones.

Today's youth are born into different social and economic circumstances and they present different attitudes and behaviors than did their predecessors. Those who finished high school in the 1970s were still much more "into" social reform than is today's generation. Today's young people have their own disadvantages, as each generation does; but they appear to be reading the realities correctly. They have become what Landon Jones, author of *Great Expectations*, calls "self-protectively conservative."

Materialistic Orientation. Every fall since 1966 the Cooperative Institutional Research Program at the University of California-Los Angeles does a nationwide study of about 300,000 college freshmen to monitor changes in student values and goals. The research team has documented dramatic shifts in student attitudes over the past quarter century. The basic finding is that the literature, philosophy and social science majors of the 1960s have been replaced by a new generation of students that is striving for money, status and power.

Why are they going to college? Nearly three-fourths of recent classes say that a very important reason is "to be able to make more money" or "to be very well-off financially." In the late 1960s less than half of college freshmen answered that way; but "developing a meaningful philosophy" was very important for more than four-fifths of them. "Developing a meaningful philosophy" is very important for less than half in the 1980s. A materialistic orientation increased by nearly a third in the past decade.

The materialistic orientation is further reflected in students' choice of career plans and majors. Over the past 20 years, the number of business majors has nearly doubled. Concurrently, traditional liberal arts majors have decreased in popularity.

What today's young people need and what yesterday's young people say they missed is not all that different. Thirty-year-old young men and women say that entering careers was a big problem for them after leaving high school. They weren't prepared for the work world, and they didn't understand their career preparation options. Young people want more help choosing careers, and parents can help them.

What Parents Can Do

Parents and young people need not be experts, but they can make better career decisions if they are aware of the main population and labor force trends that affect employment opportunities and career preparation possibilities.

The *Occupational Outlook Quarterly* (*OOQ*) is a nontechnical and very readable government periodical that features occupational and employment developments. In fact, it is the prime source for much of the later "news" that comes out in the media. The *OOQ* is published by the Department of Labor and is widely available in career centers and libraries.

Two popular magazines, *Money* and *Forbes*, occasionally feature articles that interpret the employment implications of population and labor force trends. See, also, the news magazines: *Time*, *Newsweek*, *U. S. News and World Report*, *Business Week*, and the like. These are worth paging through from time to time.

Young people are critical of school career guidance services, yet high percentages do not take advantage of the resources that high schools offer. Only half ever take a course in career planning and less than half ever attend a career day. Parents can find out what career guidance services are available at school and make sure that their sons and daughters take full advantage of what is offered. Go to the career center. Talk to the career counselor. Explain that you are a parent who is concerned about your son's or daughter's career development, and that you want to find out what resources the school has for you to work with. The guidance service will welcome your interest, believe me.

Ask whether the school offers a course for young people in career planning. If it does, get the details. One way to interest young people is to suggest the course to their friends. Mention it to friends' parents. They'd probably be grateful. The idea is to try to get a friend to take the course with your son or daughter. Young people don't want to be different. They want to be part of the gang. Two or three taking a course in career planning may also get some career planning talk going with friends, an added benefit.

Find out whether the school has a career day and when. Career day may not be the year's most popular event at school, but career day is not the time for young people to cut classes if they're serious about their futures.

Career Explorations Workbook

Each part of this book ends with the Career Explorations Workbook, a set of activities for parents and young people to work through together. By the end parents and young people will have a better sense of their occupational and career preparation possibilities and of how to make career decisions.

Now is the time to begin working through the Career Explorations Workbook with your son or daughter. Part 1 of the Workbook helps young people develop a list of career possibilities to think about. It approaches career choice in three ways: it identifies occupations that young people have already thought about; it suggests occupations that match their favorite school subjects; and it records what occupations interest inventories suggest.

The first two exercises, "Your Ideas" and "Favorite Subjects," take only a few minutes and can be done at home. "Your Ideas" requires no explanation. Simply follow the instructions. The second activity, "Favorite Subjects," asks young people to identify their favorite school subjects, circle the letters of the appropriate occupational groups that correspond to their favorite subjects, and then check the occupations in those groups that interest them. Like the first, this activity ends with young people circling the one, two, or three occupations that interest them most.

Proceed with the first two activities in Career Explorations, "Your Ideas" and "Favorite Subjects."

The third activity, "Interest Inventories," requires that your son or daughter take one or more interest inventories at school. High schools often provide interest inventories as a student service, but the student and parent must take the initiative and make the arrangements. Find out whether your high school requires that every student take an interest inventory. Maybe an interest inventory report for your son or daughter is already on file. Find out.

Interest Inventories. There are many different interest inventories, and your school counselor may have suggestions for which to take. I suggest the Strong-Campbell Interest Inventory for advanced high school students who may be thinking about attending a four-year college. The Kuder General Interest Survey is better for young people at the junior high level. The Harrington-O'Shea Career Decision-Making System is useful because it takes into account a young person's interests in particular school subjects, kinds of postsecondary education, and interests in particular occupations. Holland's Self-Directed Search is widely used but was designed for use by people who do not have access to professional counselors. Fortunately, most parents and young people need not rely on do-it-yourself career counseling.

Interest Inventories don't give answers. Rather, they offer possibilities to think about and discuss. The job isn't finished when the results come back. It's just begun.

Interest inventories are designed to give young people some fresh ideas to think about. That's their value. Interest inventories are not "tests," and there are no right or wrong answers. There is nothing magical about interest inventories. It is unlikely that the results will surprise anyone by giving a perfect match between a young person's interests and occupations. And don't expect different inventories to yield the same results. Chances are, that won't happen.

Interest Inventories don't give answers. Rather, they offer possibilities to think about and discuss. The job isn't finished when the results come back. It's just begun.

Most young people can tell you what they don't like before they can say what does interest them. Parents and career counselors need to take that into account, and they can do so by using different ways to get at occupational career possibilities–everything from the simplest question, "What do you think you would like to do?" to taking interest inventories. The idea is to build a list of possibilities, then follow the process of elimination. Let the youngster eliminate the ones he or she thinks are "gross". Keep going till they find the one that is "awesome."

My wife had a clever way of getting our two oldest sons to take an interest inventory. She arranged for them to take it with one of their friends. That made the experience a fun thing to do rather than something "Mom made me do." If all else fails, try it.

Usually there is no cost for interest inventories administered through high schools, but it is wise to check in advance. Then, make sure the results come home. Most inventories provide a summary that helps interpret the results which parents and young people may keep for later reference.

The Summary to Part 1 of the Career Explorations Workbook requests that young people review the occupations they identified in activities 1, 2 and 3, then select the three occupations that interest them most. Make sure they do this. It's important for Part 2 of the Career Explorations Workbook.

Part One: Career ExplorationsWorkbook

Career Possibilities

Introduction

Career Explorations is a workbook for young people. It is designed to help them think through their career options. The workbook organizes that effort. It develops a list of occupations to explore, gather information about the occupations, and examine ways to prepare for careers through additional schooling or training in the workplace.

Career Explorations provides a way for young people and parents to think through career possibilities together. The workbook puts young people in the role of decision makers. It puts parents in the role of coaches and advisers. Parts of the workbook ask young people how they feel about certain aspects of careers and to discuss these with their parents.

Career Explorations divides career choices into four parts. The parts follow the four parts of the book. Part 1 helps young people develop a list of career possibilities. Part 2 helps parents and young people gather and evaluate information about the occupations. Part 3 shows them how to get information about additional schooling options; and Part 4 outlines what information to get on earning-while-learning options, apprenticeships, industry training and education programs, military occupational training, and full-time work following high school.

Young people and their parents can work through the parts at whatever pace they wish. Part 1, "Career Possibilities," can be done partly at home and partly in a career center. It should be done as soon as possible. Part 2, "Occupational Information," can be done at a library or career center. Parts 3 and 4 focus on career-preparation options and can be done partly at a library or career center, but may also require information from outside sources. Career Explorations concludes with "Next Steps," which suggests ways for parents and young people to gather additional information on career possibilities and career preparation options.

Young people may write answers to Part 1 in this Workbook. Parts 2, 3, and 4 require that they use additional blank pieces of paper, which the instructions refer to as "worksheets".

The rest of Career Explorations is for young people, but parents should read it too.

Part 1: Career Possibilities

"Career Possibilities" helps you develop a list of occupations that may interest you. It approaches career choice in three ways:

It examines occupations you have already thought about.

It suggests occupations that follow from school subjects that interest you.

It indicates occupations that interest inventories suggest for you.

"Career Possibilities" will help you identify three occupations that interest you.

Your Ideas

Start with occupations that you have already thought about. List two occupations that you have considered at one time or another.

____

____

What other occupations have your father, mother, grandparents, friends, teachers, or counselors mentioned that you might want to consider?

____

____

List two other occupations that you would like to know more about.

____

____

Think about the occupations you listed. Circle at least one, but no more than three, that interest you.

Favorite Subjects

A second way to explore career possibilities focuses on school subjects. If you like a subject and do well in it, that may be a good hint about occupations you would like. Decide what are your favorite school subjects. Learn what occupations follow from those subjects.

Read the list of school subjects. Check the box in front of one or two of your favorites.

School Subjects	*Occupational Groups*
☐ AGRICULTURE (Agriculture Science, Agriculture, Shop, Forestry, Soil Science)	C
☐ ART or MUSIC (Arts and Crafts, Commercial Art, Drawing, Chorus, Orchestra)	E, I
☐ BUSINESS (General Business, Bookkeeping, Typing, Business Law, Business English, Economics, Business Machines, Computer Science, Office Procedures, Shorthand)	A, D, K, L
☐ DISTRIBUTIVE EDUCATION (Retail Sales, Merchandising, Marketing, Distribution)	A, K, L
☐ DRIVER EDUCATION	N, Q
☐ HEALTH (Life Science, Biology, Physiology, Nursing, First Aid)	A, F, G, H, M
☐ HOME ECONOMICS (Sewing, Cooking, Tailoring, Foods, Interior Decorating, Home Furnishings)	E, G, I, K, M
☐ TRADES and INDUSTRY (Drafting, Graphic, Arts, Carpentry, Architecture, Printing, Auto, Mechanics, Metal Shop, Electronics, TV and Radio)	B, I, J, N, 0, P, Q
☐ LANGUAGE (English, Speech, Debate, and foreign languages such as Spanish, French, German)	D,E,G,I,K
☐ MATHEMATICS (General Math, Business Math, Algebra, Geometry, Trigonometry, Calculus)	A, B, C, J, K, L
☐ PHYSICAL EDUCATION (Football, Basketball, Baseball, Gymnastics, Track, Swimming)	D, E, 0
☐ SCIENCE (General Science, Physical Science, Biology, Botany, Zoology, Geology, Chemistry, Physics)	B, C, F, G, H
☐ SOCIAL STUDIES (History, Geography, Government, Sociology, Psychology, Political Science)	D, E, I, M

Each school subject is followed by letters that represent occupational groups. In the lists that follow, circle the letters in front of the titles to occupational group that match your favorite school subjects.

Example: If your favorite school subject is Agriculture, circle C.

[✓ C]. NATURAL SCIENTISTS AND MATHEMATICIANS

A. ADMINISTRATORS AND MANAGERS
- ☐ Accountants and auditors
- ☐ Bank officers and managers
- ☐ Buyers, retail and wholesale trade
- ☐ Construction inspectors, public administration
- ☐ Health and regulatory inspectors
- ☐ Health services administrators
- ☐ Hotel managers and assistants
- ☐ Personnel and labor relations specialists
- ☐ Purchasing agents
- ☐ School administrators
- ☐ Underwriters

B. ENGINEERS, SURVEYORS, AND ARCHITECTS
- ☐ Aerospace engineers
- ☐ Architects
- ☐ Chemical engineers
- ☐ Civil engineers
- ☐ Electrical engineers
- ☐ Industrial engineers
- ☐ Mechanical engineers
- ☐ Metallurgical engineers
- ☐ Mining engineers
- ☐ Nuclear engineers
- ☐ Petroleum engineers
- ☐ Surveyors

C. NATURAL SCIENTISTS AND MATHEMATICIANS
- ☐ Actuaries
- ☐ Agricultural scientists
- ☐ Biological scientists
- ☐ Chemists

- ☐ Computer systems analysts
- ☐ Foresters and conservationists
- ☐ Geologists and geophysicists
- ☐ Mathematicians
- ☐ Meteorologists
- ☐ Physicists
- ☐ Statisticians

D. SOCIAL SCIENTISTS, SOCIAL WORKERS, RELIGIOUS WORKERS, AND LAWYERS

- ☐ Economists
- ☐ Lawyers
- ☐ Protestant ministers
- ☐ Psychologists
- ☐ Rabbis
- ☐ Recreation workers
- ☐ Roman Catholic priests
- ☐ Social workers
- ☐ Sociologists
- ☐ Urban and regional planners

E. TEACHERS, LIBRARIANS, AND COUNSELORS

- ☐ College and university faculty
- ☐ Counselors
- ☐ Kindergarten and elementary school teachers
- ☐ Librarians
- ☐ Secondary school teachers

F. HEALTH DIAGNOSING AND TREATING PRACTITIONERS

- ☐ Chiropractors
- ☐ Dentists
- ☐ Optometrists
- ☐ Physicians
- ☐ Podiatrists
- ☐ Veterinarians

G. REGISTERED NURSES, PHARMACISTS, DIETITIANS, THERAPISTS, AND PHYSICIAN ASSISTANTS

- ☐ Dietitians
- ☐ Occupational therapists
- ☐ Pharmacists
- ☐ Physical therapists
- ☐ Physician assistants
- ☐ Registered nurses
- ☐ Respiratory therapists
- ☐ Speech pathologists and audiologists

H. HEALTH TECHNOLOGISTS AND TECHNICIANS

- ☐ Clinical laboratory technologists and technicians
- ☐ Dental hygienists
- ☐ Electrocardiograph technicians
- ☐ Electroencephalographic technologists
- ☐ Health-record technicians
- ☐ Licensed practical nurses
- ☐ Radiologic technologists
- ☐ Surgical technicians

I. WRITERS, ARTISTS, AND ENTERTAINERS

- ☐ Actors and actresses
- ☐ Commercial and graphic artists and designers
- ☐ Dancers
- ☐ Designers
- ☐ Musicians
- ☐ Photographers
- ☐ Public relations workers
- ☐ Radio and television announcers and newscasters
- ☐ Reporters and correspondents
- ☐ Singers
- ☐ Writers and editors

J. OTHER TECHNOLOGISTS AND TECHNICIANS

- ☐ Air traffic controllers
- ☐ Broadcast technicians
- ☐ Computer programmers
- ☐ Drafters
- ☐ Electrical and electronics technicians
- ☐ Legal assistants
- ☐ Library technicians
- ☐ Tool programmers, numerical control

K. MARKETING AND SALES

- ☐ Cashiers
- ☐ Insurance agents and brokers
- ☐ Manufacturers' sales workers
- ☐ Real estate agents and brokers
- ☐ Retail trade sales workers
- ☐ Securities sales workers
- ☐ Travel agents
- ☐ Wholesale trade sales workers

L. ADMINISTRATIVE SUPPORT

- ☐ Bank tellers
- ☐ Bookkeepers and accounting clerks
- ☐ Computer operating personnel
- ☐ Mail carriers and postal clerks
- ☐ Receptionists

- ☐ Reservation agents and transportation ticket clerks
- ☐ Secretaries and stenographers
- ☐ Shipping and receiving clerks
- ☐ Teacher aides
- ☐ Telephone operators
- ☐ Typists

M. SERVICE

- ☐ Barbers
- ☐ Bartenders
- ☐ Building custodians
- ☐ Cooks and chefs
- ☐ Correction officers
- ☐ Cosmetologists
- ☐ Dental assistants
- ☐ Firefighters
- ☐ Flight attendants
- ☐ Guards
- ☐ Medical assistants
- ☐ Nursing aides, orderlies, and attendants
- ☐ Police and detectives, public service
- ☐ Waiters and waitresses

N. MECHANICS AND REPAIRERS

- ☐ Air-conditioning, refrigeration, and heating mechanics
- ☐ Aircraft mechanics
- ☐ Appliance installers and repairers
- ☐ Automotive body repairers
- ☐ Automotive mechanics
- ☐ Coin-machine service's and repairers
- ☐ Communications equipment mechanics
- ☐ Computer service technicians
- ☐ Diesel mechanics
- ☐ Farm equipment mechanics
- ☐ Industrial machinery repairers
- ☐ Line installers and cable splicers
- ☐ Millwrights
- ☐ Musical instrument repairers
- ☐ Office machine repairers
- ☐ Radio and television service technicians
- ☐ Telephone installers and repairers

0. CONSTRUCTION

- ☐ Bricklayers and stonemasons
- ☐ Carpenters
- ☐ Cement masons and terrazzo workers
- ☐ Construction laborers and helpers
- ☐ Dry wall applicators and tapers
- ☐ Electricians
- ☐ Floor-covering installers
- ☐ Glaziers
- ☐ Insulation workers
- ☐ Ironworkers
- ☐ Painters and paperhangers
- ☐ Plasterers
- ☐ Plumbers and pipe fitters
- ☐ Roofers
- ☐ Sheet-metal workers
- ☐ Tilesetters

P. PRODUCTION

- ☐ Assemblers
- ☐ Automotive painters
- ☐ Blue-collar worker supervisors
- ☐ Boilermakers
- ☐ Bookbinders
- ☐ Butchers and meatcutters
- ☐ Dental laboratory technicians
- ☐ Dispensing opticians and ophthalmic laboratory technicians
- ☐ Furniture upholsterers
- ☐ Hand molders
- ☐ Jewelers
- ☐ Job and die setters
- ☐ Lithographers and photoengravers
- ☐ Machine tool operators
- ☐ Machinists and layout workers
- ☐ Patternmakers
- ☐ Photographic process workers
- ☐ Printing press operators and assistants
- ☐ Shoe repair occupations
- ☐ Stationary engineers
- ☐ Tool makers and die makers
- ☐ Typesetters and compositors
- ☐ Water and sewage treatment plant operators
- ☐ Welders and flamecutters

Q. TRANSPORTATION AND MATERIAL MOVING

- ☐ Airplane pilots
- ☐ Bus drivers
- ☐ Construction machinery operators (Operating engineers)
- ☐ Industrial truck operators
- ☐ Truck drivers

After you have circled the letters in front of the titles to the occupational groups that match your favorite school subjects, go back to the beginning of the list of groups. Go to the titles you marked by circling the letters that precede them. Mark the small boxes in front of the occupations under the titles that interest you.

Example: If you circled

Q. TRANSPORTATION AND MATERIAL MOVING,

then consider the occupations listed under the title and check the ones that interest you.

☐ Airplane pilots
☐ Bus drivers
☐ Construction machinery operators (Operating engineers)
☐ Industrial truck operators
☐ Truck drivers

After you check the small boxes, circle at least one but no more than three occupations you checked that interest you the most.

Interest Inventories

A third way to develop a list of career possibilities uses the results from interest inventories. Interest inventories may give you some new possibilities to consider. They are not tests. There are no right or wrong answers.

Career centers often have different interest inventories you can take. Usually, there is no charge, but check to make sure. Talk with your counselor and ask to take an interest inventory. Better yet, take two different ones. Ask the counselor to suggest which interest inventories you should take.

Bring the results home and discuss them with your parents. The inventory results may suggest new occupations that interest you. If so, that's good. That's what interest inventories are supposed to do. Other suggested occupations may turn you off. That's OK too. Figure out what you don't like about them and forget them.

Choose three occupations that the interest inventories suggest that you may want to explore further. Write them here.

Circle the ones that interest you.

Summary

You have completed three different ways to identify career possibilities:

Your Ideas

Favorite Subjects

Interest Inventories

For each way, you circled one, two, or three occupations that interest you most. Go back to the occupations you circled in the three activities. From the three groups, choose the three occupations that interest you most. Write them here.

2

THE WORK WORLD

Four

How to Think About the Work World

There are more than thirty thousand occupations listed in the *Dictionary of Occupational Titles*. How can anybody sort through that many possibilities? It's possible, but you have to go about it in an orderly way. We can't assume that young people are prepared to do that, or that they know the basic categories with which to work. A practical nurse in North Carolina expressed her frustration about not having basic information about work opportunities while in high school: "True, I could have asked a counselor, but at sixteen or seventeen years old, one does not want to appear a fool by asking for basic information. I would have welcomed a rack of brochures in the girls' rest-room."

I begin this chapter with a brief discussion of how the work people do affects their lives and welfare. I offer ways to classify work that will help parents and young people think about career possibilities. I end the chapter with information that is very much on the minds of many young people, the prospects of becoming a professional athlete.

Work and Life-Style

For most people, work requires more time and more effort than any other lifetime activity.

If you and I live the proverbial three score years and ten, then our lives will add up to some 600,000 hours of time. Our work lives are shorter. Figuring they begin at about age twenty and continue to, say, age sixty-five, our work lives add up to about 400,000 hours. That's two-thirds of our lives.

We spend about a third of our work lives sleeping. That brings down the remainder to about 260,000 hours and leaves us with about sixteen hours a day for forty-five years. Many of us work eight, ten, or twelve hours every day, about two-thirds of the remaining time. For many people, work demands more time, provides greater satisfactions and dissatisfactions, and exerts more wear and tear on physical, mental, and emotional well-being than any other activity. Work is central to life and life-style. A lawyer's son with a college degree in political science now works as manager for a business service in Dallas. He told us: "Jobs can have a large influence on your life. One must be prepared to actively pursue a career that will fulfill his needs economically, socially, and still allow him to nurture a solid self-image."

Here's how work relates to five important areas of life and well-being.

Earnings and Benefits

Ours is a market economy. People use money to buy life's essentials– food, clothing, shelter, medical services– and life's luxuries–entertainment, vacations, cosmetics, and club memberships. Money is the standard exchange for life's niceties and necessities.

Fringe benefits supplement compensation by nearly a third and in some cases by more than a third of wages and salaries.

Families and individuals require a steady supply of money that they can exchange to satisfy their needs and wants and to maintain their standard of living. How much families need has been steadily increasing, especially during the past two decades. For example, in 1963 it took a minimum of $82 a month to maintain a family of four; in 1973 it took $149 a month; in 1983 it took $296 a month; and by 1993 it will take $575 a month. Costs have been doubling every decade.

Most people earn those resources in the form of wages or salaries. Money is the unit of exchange by which we trade the sweat of our brows for the food on our tables, the roofs over our heads, and the gadgets with which we play.

Fringe Benefits. Part of that exchange takes the form of fringe benefits. Benefits include retirement programs, medical and dental programs, life insurance, disability insurance, unemployment compensation, sick leave, vacations, and more. In the U.S. labor force, fringe benefits supplement compensation by nearly a third and in some cases by more than a third of wages and salaries (compared with 20 percent in 1966). That means that for every three dollars earned, employers set aside another dollar in benefits for the job holder.

Whether people enjoy "fringes" depends on whether they work. The unemployed are not only without paycheck, they are also without medical, dental, and retirement programs. When catastrophe strikes, the benefits package may be more important to the worker and the worker's family than the salary. The unemployed are without that safety net.

The amount of fringes workers are entitled to depends on the benefit packages that go with their jobs. How important fringe benefits are is evident from the issues that separate employers and employees in contract negotiations. Pay hikes and inflationary increments are major considerations, but often the fringe benefits package is the issue. One of the main reasons people work is to acquire the security that comes in the form of wages or salaries and fringe benefits.

Identification

People work to earn a living. But people also work for other reasons. Work tells others who we are. Work identifies a person.

Watch and listen as people introduce each another at a party. A host will introduce a couple as "Harry Rouse and his wife, June; Harry is the manager of Piggly Wiggly on East Washington." A woman introduces herself as "Dottie Brandeis; I'm in personnel at Southern Natural Gas." If a woman does not work, she is likely to say, "I'm Betty Peterson; my husband is a driver for Middletown International."

Work answers the question: "Who am I?" Occupations tell others that "I am a doctor," "I am a teacher," or "I am a salesperson." If a person has no occupation, that person's status may be ambiguous, which is why Betty Peterson introduced herself in terms of her husband's occupation. The work a person does and the title associated with the position provide clues about a person. Thus, the labels "doctor" and "judge" indicate a person's education and probable income.

The point is not that one life-style is better than another, but that life-styles differ. Life-styles are closely associated with people's occupations, the educational levels their occupations require, and the income levels their occupations provide. People identify themselves when they name their occupations, and they give clues about themselves when they name the kind of work they do.

Schedules and Associates

Work dictates how people spend their time and with whom they associate. Work regulates the tempo and rhythm of life. On a day-to-day basis work schedules dictate when people get up in the morning, when they eat lunch, when they return home, and whether they bring work home in the evening. Work dictates whether they work eight to five, from ten in the evening until six in the morning, or work till the job gets done. Work determines whether people are home on weekends, take a vacation in the summer or winter, and whether the holiday season is a time of relaxation or busy-busy, push-push activity.

What people think about themselves is tied closely to the work they do.

It doesn't stop there. Job requirements spill over into the lives of spouses and families who arrange meals, shopping trips, leisure activities, and holiday weekends around work schedules. Work structures people's time. It dictates how people use their time, those 260,000 waking hours of their adult lives.

Associates. Work also determines with whom people associate. People spend more time with others in their line of work and get to know those people better. What others do on the job affects them, and what they do on the job affects others. Co-workers take each other into account.

Work relationships spill over into friendships and social activities. Co-workers go hunting together, drink beer or martinis together, bowl together, or play bridge together as couples. Often work associates live in the same part of town, which means they may attend the same PTA, church, or synagogue. Work associates run into each other at the pet shop. They buy Girl Scout cookies from each other's children. Co-workers meet at the company Christmas party, work on committees together, sign the same sympathy cards, pull for the same regional football teams, weep over the same soap operas, and complain about the same ruts in the same city streets.

Work sorts people into groups by regulating their schedules and assigning them common tasks. These associations often extend into off-work hours and shared social activities.

Meaning and Satisfaction

Many people seek purpose and meaning in life from their work. Because work structures the rest of life, it is the main reference point that people take into account when they make other decisions. Can a woman join the Tuesday morning golf club? It depends on her work schedule. Can a man knock off a couple of days and go fishing? It depends on his work load and company policy.

What people think about themselves is tied closely to the work they do. A good job means more than earning good wages. It means doing work that makes a difference, work that is important to the worker and to others.

Research documents what people look for in jobs and what gives them satisfactions and dissatisfactions. Particularly among males, jobs are the source of their greatest likes and dislikes. Studies of marital adjustment indicate that work conditions influence the husband's marital adjustment. Because the husband's marital adjustment affects the wife's, job satisfaction or dissatisfaction is a big factor in the quality of the marital relationship.

Two sets of job characteristics affect worker satisfaction. Some have to do with working conditions. These include pay, working hours, and supervisory practices. Others have to do with the content of the job: what the person does on the job, job responsibilities, and what the end product is. People usually get their satisfactions from what they do on the job, but their dissatisfactions come from the working conditions. This means that job dissatisfactions can be reduced by improving such things as pay, work hours, and supervisory practices, but improving working conditions does not necessarily improve worker satisfaction. People get their satisfactions from what they do.

People try to find meaning in their work. What they do and the conditions in which they work have a substantial effect on their attitudes toward other people, on their life-styles, and on their quality of life.

Continuing Education

For many people, work is the continuing education department of life. I do not mean on-the-job training programs; rather, I mean learning experiences that come with the job. These involve developing the worker's mental capacities.

"Substantive complexity" of work refers to the amount of thought and independent judgment work requires. The extent to which work requires workers to think and exercise independent judgment spills over into all areas of their lives, not just their working hours. The more that work requires people to think and make judgments, the more open they are to new experiences, the more independent they become, and the more they think critically in nonwork settings. People who do work that requires thinking and judgment gain confidence in their ability to handle "real world" problems, and they increase their respect for their own capacities. Substantive complexity in work makes people more intellectually flexible.

Even slight differences in the substantive complexity of work early in the career may make large differences in a person's career achievements later in life. Early jobs that require young people to think and make decisions equip them with the intellectual tools and skills to advance to increasingly more complex jobs.

How to Think about Employment

Sometimes the words people use are confusing and muddle their thinking. People may use the same word to mean different things. For example, ask a seventeen-year-old what a "good" car is, then brace yourself because the answer will probably have a lot more to do with fuel-injection engines and mag wheels than monthly car payments, insurance premiums, and gas mileage. "Good" means different things to different people.

The same thing happens when people talk about work. Some use words like "job" and "career" and "work" and "occupation" as if they were the same thing. But a job is not the same as an occupation. A career is not the same as work. To have a job is not the same as having a career.

People think with words and concepts, ideas they share with others. If parents and young people are to think clearly about careers, one place to start is by using key concepts more carefully. In this section I make some important distinctions between key words.

Work

What is work? People use the word work as if everybody knows what it means and as if everybody means the same thing when they use the word. But consider the following uses:

"I have a lot of work to do."

"I have to go to work."

"My work is interesting."

"A lot of work" to do refers to the amount of activity and effort that is waiting. "Go to work" implies a place, whether there is a lot of effort waiting to be done there or not. And "interesting work" has to do with what a person does, no matter how much there is to do or where it is to be done.

Work is a slippery word. It means different things to different people. I use the word, work, to mean expending effort gainfully. Work is a verb. Work is doing something. That doesn't mean that people have to sweat or get a backache when they work. People who sit behind a desk also work. Work means expending effort. It can be physical, but it can also be mental.

There are many things people do that involve effort, but that doesn't mean they are working. An infant may wave arms and kick legs excitedly, but that isn't work. Work means expending effort productively. Other people pay for the end product.

This definition, that work is expending effort gainfully, helps avoid confusion and arguments. Housewives, for example, work in the sense that they expend effort, and they do it productively. But they are not paid. It isn't gainful. Consider also the distinction between work and leisure activity or play. Play is activity engaged in for its own sake. Play is valued for the satisfaction it brings to the person, not for the productivity that others value and are willing to pay for.

What is play for one person may be work for another. When my oldest son would come home all skinned up and with torn pockets on his blue jeans, he would explain that he was having fun playing football. But when Eric Dickerson carries the ball on Sunday afternoon, you better believe that's work. One does it primarily for personal satisfaction, the other for gain. Work means expending effort gainfully.

Job

Work involves expending effort productively. When that happens under a set of arrangements that includes payment of wages in exchange for performing regular duties, then a person has a job. Work arrangements and regular duties imply a sense of organization and continuity. The arrangements include a place where work is done. A person takes a job (work arrangement) in order to work (expend effort productively).

Both work and job involve gainful employment, but there is a difference. Work refers to what a person does. Job refers to the set of arrangements or conditions under which wages are paid for productive effort.

Consider this example from an earlier stage in my wife's career. Nancy worked in the sense of expending effort in three different ways. First, as a mother and housewife she put forth considerable effort around the house. But she wasn't employed to do that and she wasn't paid. It wasn't her job. Second, Nancy was a volunteer library assistant at Columbian Elementary School. She had an assigned set of tasks, and she did them at a particular time and place. But she wasn't employed there. That wasn't her job. Third, Nancy worked in a gift shop named the Candlelighter. She expended effort productively. She followed routines, did her assigned duties, met her responsibilities, and under those arrangements the shop paid her. That was her job.

Having a job means expending effort gainfully under a set of arrangements that pays wages for tasks performed.

Occupation

I work. I seldom sweat from pushing a pencil, dictating a memo, calculating an equation, or writing a book. But I expend effort gainfully.

I also have a job. I have administrative chores to do, people to supervise, budgets to manage, projects to direct, and manuscripts to write. I do those things in exchange for a salary. I do them in an office. As a matter of fact, I do 95 percent of my work behind the same walnut desk as I sit in the same Herman Miller chair, property code number 766016. That's part of the arrangement. My job is at North Carolina State University.

I also have an occupation. Having an occupation is not the same as doing work or having a job. My occupation is the line of work I do. When my IRS 1040 form asks for my occupation, I write "research sociologist."

Occupations divide the work world into common areas in which people work. Some people, especially young people, don't know how to group occupations. For example, the daughter of a newspaper editor took a bachelor's degree in accounting in Honolulu and now works for a petroleum products wholesaler in Portland. When she thought back to the problems she had since leaving high school, she said: "I had likes and dislikes, but didn't know how to put them together into available career opportunities."

Occupations group common areas. Teaching is an example. There is much variation within that occupation: kindergarten teachers and college teachers, music teachers, voc/tech teachers, Sunday-school teachers, teachers who do administration, teachers who do counseling, and the like. All are teachers. They share commonalities in their background and training and, one way or another, they are all involved in the educational enterprise. They are part of the same occupation.

People have occupations, and when they move they take their occupations with them and apply their line of work in new jobs. For example, my sister in St. Louis is a nurse. She left one hospital and went to work for another. She changed jobs, but she did not change occupations. Jobs stay with employers, but occupations stay with workers.

White-Collar and Blue-Collar Occupations

A common labor force distinction in the past was between white- and blue-collar occupations. The difference had to do with the extent to which occupations required working with people and, therefore, with the amount of training or schooling required to occupy a position. Since white-collar occupations required higher levels of education and interpersonal skills, white-collar occupations generally had higher social status than blue-collar occupations.

But this has changed. As society has moved to a service economy, which requires working with people, and workers have increased their levels of training and education, distinctions based on the extent to which occupations required working with people and higher levels of education has disappeared and, officially, the Bureau of Labor Statistics no longer makes a distinction between white- and blue-collar. When the distinction is made, white-collar occupations traditionally refer to professional and technical workers, managers and administrators, clerical workers, and sales workers. Blue-collar occupations traditionally refer to craft workers, operatives, nonfarm laborers, service workers, and farm workers

Firms

A firm is the entity–the business, company, institution, or organization–for which a person works. Typically, a firm is the place where a person goes to work: Mama's Pizza, Johnny's Cafe, or Southern Gas and Electric.

Firms are organizational units. They organize complementary tasks related to production, processing or marketing, and bring people with the necessary skills together to accomplish those tasks. The product may be as intangible as psychological advice or as tangible as a steel I-beam. The number of people involved may be as few as one, as is the case with self-employed workers, or as many as hundreds of thousands of workers in multinational corporations. In the latter case, firm typically refers to the local office of the larger corporation. Whatever the size, firms are the organizational structures within which jobs are located. Firms are where people do the work.

Career Lines

People work. They hold jobs that are compatible with their occupations in firms that operate in an industrial sector and division of the economy. People also have careers and follow career lines.

Career lines are the sequences of jobs people regularly follow. For example, elementary school teachers may change to secondary school teacher, then to college teacher or to school administrator over their work histories. That is an example of a string of jobs elementary school teachers regularly follow. It's a career line.

There are patterns to people's movement between jobs. There are regularities to the changes which makes the changes predictable. Over time people develop experience, skills, and contacts that open doors to new jobs but close doors on others. Career lines are the job sequences that people typically follow over their work careers.

Career lines are like highway systems that cross the country. Career lines connect jobs as highways connect cities. Some career lines are heavily traveled, like interstate systems. Others have little traffic, like country roads. Some roads go through many intersections where the traveler can take a different route. That's the way some career lines are. There are many opportunities to change course. Others go for miles without exits. So, also, with career lines. For example, highly trained neurosurgeons usually don't have many career options whereas MBAs may have many.

Careers

A career is the particular sequence of jobs that an individual goes through. A career is the route that one person follows. Careers are like motorists who travel the highways. Motorists make choices among routes, and individuals choose among career lines. Motorists can follow different highways to get where they want to go, but their choices are limited to the available road systems. Similarly, workers choose from the career lines that regularly occur in the economy.

This does not mean that all travelers know where they are going or that they all have maps in front of them. To be sure, many seem to be on a casual Sunday afternoon drive. When the weather looks good– i.e., when unemployment is low, wages are stable, and productivity is high–that's an enjoyable way to go. But when travelers' warnings are out and the wind is howling, that's an especially good time to get started in the right direction, to know where the main roads are, to have a good idea of where you want to go, and to know how you are going to get there. That's true of careers, too.

Industries

The two concepts that are most basic to career planning are occupations and industries. Whereas an occupation is the line of work a person does, an industry is the broad field of activity in which the employer is engaged.

Industries indicate what employers do. If a woman says that she works in the petroleum industry, the listener will know the broad area in which her employer operates, namely, the production and distribution of gas and oil. Note, however, that industry does not reveal what the woman does. She may be a chemist, truck driver, office manager, computer programmer, or have any number of other occupations within the petroleum industry. She hasn't identified her occupation. So also, if the woman says that she is an engineer, gives her occupation but not her industry, then the listener knows what she does but is left to wonder in what industry. Agriculture? Construction? Petroleum?

Whereas occupations indicate the line of work a person does, industries indicate the broad field of activity in which the employer is involved.

Knowing both a person's occupation and industry provides maximum information. For example, if the woman answered, "I am a chemist for Mobil Oil," the listener would have a pretty good idea what she does. Her occupation, chemist, describes what she does. The industry, oil company, identifies the broad field of activity in which her employer does business. Whereas occupations indicate the line of work a person does, industries indicate the broad field of activity in which the employer is involved. Complete information requires specifying both a person's occupation and industry.

Classification Systems

Young people have problems choosing a career, and helping them sort out the possibilities has been a confusing task in the past. One reason has been that the business of classifying occupations and industries has been a terrible mess in our society for a long time because the U. S. has not used a uniform occupational classification system. One federal agency would use one system, another would use its own system–a different one, researchers would use their systems, and career information books would use still other systems. Trying to match categories was like trying to fit Ford parts on a Chevy car. The result was chaos.

But take heart. That has changed. Congress decided to clean up the mess by developing standard classifications for the entire country. That system is now largely in place and it makes sense for us to use it. The broad occupational groupings I use in this book follow in principle the Standard Occupational Classification (SOC) system that is now used by all Federal agencies. That means that you should be able to get additional information about occupations if you follow the categories I use in this book. Be forewarned, however, that some commercial publishers of career information are still dragging their feet and reporting information using their old-fashioned categories. If you run into that problem, I would suggest that you go to a different, a more up-to-date resource.

Occupations and industries are organized in subcategories, and it is important to have a basic familiarity with the categories:

> The occupation/industry categories provide a useful system with which to think about the work world.
>
> The occupation/industry categories correspond to the way the government and media report on the labor force–e.g., unemployment rates, management/labor negotiations, financial reports.
>
> Labor force trends and projections are made in terms of major categories of occupations and industries.

In the next chapter I discuss the employment outlook on the basis of the occupational groups and industry sectors and divisions. If you want to benefit from the career information that is available you need to learn to think and talk in terms of these categories. Once you know the categories, you can limit your information search to the ones that interest you and forget about the rest. It's a time saver.

Occupational Groups

There are numerous occupations in society, i.e., lines of work people do. The *Dictionary of Occupational Titles*, for example, organizes more than 30,000 separate occupations into 9 primary occupational categories, 82 occupationally specific divisions, and 559 occupational groups. That's a lot of small print to wade through. One way to find through it is to get to the categories that interest you. These are the basic categories when it comes to thinking about occupations, the lines of work people do.

Managerial and Management Related Occupations. Management occupations direct the activities of businesses, government agencies, and other organizations. They keep abreast of trends in society that effect their organizations and they plan directions for their organizations: whether the organization should grow, maintain its present size, or downsize, and what rate of change the organization will follow. Management establishes policies and procedures that govern organizations. People who work in management-related occupations gather relevant information, process it, implement policies and procedures, and provide technical support to managers.

Engineers, Surveyors, and Architects. These occupations design things–machinery, highways and bridges, shopping centers, buildings, and various products. Specialists in these fields design subsystems, such as electrical systems for automobiles, air conditioning and ventilation systems for skyscrapers, or stand alone products like calculators, kitchen cabinets, and lawn sprinklers. People in these occupations take ideas and show how they will work on paper.

Natural, Computer, and Mathematical Scientists. People in this group do research. They figure out how things work and how to solve problems. They do this by stating the problem in mathematical formulae and solving often times very complex mathematical equations.

Lawyers, Social Scientists, Social Workers and Religious Workers. These people conduct research on the attitudes and behaviors of individuals, groups, and society at large and provide social services to people. Social scientists try to understand how groups function. Practitioners try to use that information to help people and groups.

Teachers, Librarians, and Counselors. These occupations help people learn, find information, or gain insight into their own attitudes and behaviors. These people work in settings as varied as day-care centers, retirement communities, and personnel offices in large corporations. They work with such diverse groups as preschoolers, the aged, and workers. The jobs may involve showing young children how to color in coloring books, helping the elderly cope with terminal illnesses, or helping workers overcome problems of drug or alcohol addition.

Health Diagnosing Practitioners. These people are in the business of diagnosing, treating, and trying to prevent illness and disease. They work with people or animals. Examples include dentists, medical doctors, chiropractors, and veterinarians.

Health Assessing and Treating Occupations. These workers advise people on ways to maintain or improve their health, care for the sick, and help the disabled. They put people on weight-loss programs and exercise routines, explain proper nutrition and changes in eating habits, and care for the ill. Examples include registered nurses, pharmacists, physical therapists, mental health clinicians, and dietitians.

Writers, Artists and Entertainers. These people write magazine articles and books, news reports, press releases, and entertainment literature. They record and present people, places, and events with visual and auditory equipment. They develop advertisements, public relations activities, and communicate through the media. They create and provide entertainment and performances of artistic works. This group includes writers, reporters, public relations specialists, print and broadcast communicators, and performing artists.

Technician Occupations. People in these occupations provide technical information and assistance to professional workers. They operate technical equipment, know how to program equipment–for example, put information into computers, process the information, get the information out in a usable form, and interpret it. Occupations in this area include computer programmers, science technicians, engineering technicians, legal assistants, broadcast technicians, library technicians, and science technicians.

Marketing and Sales Occupations. These people sell goods and services, purchase products and property for resale, and stimulate public demand for their products. Occupations include retail sales workers, cashiers, securities and financial service sales people, real estate agents, and travel agents.

Administrative Support Occupations, including Clerical. These occupations provide the variety of work that is necessary to keep an office functioning efficiently. They prepare memos, letters, and reports; collect accounts; gather and distribute information; operate office equipment including typewriters, word processors, copy machines, and computers; do bookkeeping, filing, statistical analysis, and the like. Examples of workers in these areas include secretaries, hotel desk clerks, bookkeepers, and word processors.

Service Occupations. Service occupations do things for other people. Protective services include police officers, fire fighters, prison guards, security officers, and correction officers. Food and beverage preparation services include bartenders, waiters, waitresses, and people who prepare and package fast foods. Health services include medical assistants, dental assistants and nurses aides. Personal services include barbers, cosmetologists, and home-health aides. Cleaning and building services include janitors, building custodians, chimney sweeps, carpet and window cleaners.

Agriculture, Forestry, Fishing and Related Occupations. These occupations are involved in producing food, fiber and wood. They cultivate plants, raise animals, harvest forests, and catch fish.

Mechanics, Installers and Repairers. These occupations set up, put in place, and assure that equipment and machinery is operational. Workers maintain, adjust, and repair home appliances and industrial equipment, computers and other types of office equipment, automobiles, trucks, tractors, other vehicles, and stationary equipment.

Construction Trades and Extractive Occupations. These occupations are involved with large projects and structures. Workers build, maintain, retrofit, remodel, modernize, and otherwise alter buildings, highway systems, dams and bridges. They operate oil and gas drilling equipment and coal and metal mining equipment. Many operate heavy equipment.

Production Occupations. Production occupations do things that relate to producing goods. Workers install, adjust, maintain, and operate machinery. They use hand-tools and hand-held power tools to make and assemble products. They produce durable (for example, furniture and automobiles) and nondurable goods (for example, books, toothpaste, and picnic plates).

Transportation and Material Moving Occupations. These occupations operate equipment that is used to move people, material, and other equipment. Workers include bus drivers, aircraft pilots and flight engineers. They operate equipment to move materials including fork lift operators, truck drivers, ship pilots, and railroad engineers.

Handlers, Equipment Cleaners, Helpers and Laborers. These people do routine, unskilled tasks that assist skilled workers. They may handle animals, wash semi-trucks or steam-clean engines. Many work in construction doing manual tasks such as assisting with constructing and tearing down forms, loading and unloading equipment, gathering and disposing of used material, and doing site cleanup work.

These are the major categories that federal agencies use to discuss trends and employment projections in occupations. Parents and young people can use these same categories to sort out their career interests, seek additional information, and plan ways to prepare for a career.

Industry Sectors and Divisions

Federal agencies also classify employment by industries. Industries are the broad areas of activity in which firms do business. Industry sectors and divisions are the second set of categories that parents and young people should learn to differentiate. Industries have been largely ignored by career counselors in the past though, in my judgment, thinking about the industry in which a person wants to work is as important as choosing an occupation.

Why are industries important? And why learn to differentiate among them? The reasons are straightforward:

> Because parents and young people have to know about industries if they are to understand today's labor market.
>
> Because some occupations appear in only one or a few industries, whereas other occupations appear in many industries. For example, aircraft mechanics are employed in few industries, whereas secretaries work in many industries.
>
> Because the fortunes of a particular industry are important determinants of the economic health of firms that employ workers in specific occupations.

It isn't possible to keep track of what is going on in the many individual industries, but it is possible to follow major trends as these affect groups of industries. A thirty year old secretary who has a bachelor's degree in history and works for an engineering and architectural firm in England told us: "If they [young people] want relatively interesting jobs and good salaries, they ought to coolly analyze the job market as you would the stock market before investing." Parents and their sons and daughters have to know how to think and talk about the labor market if they want to make sense out of today's career opportunities. That includes knowing the major industry sectors and divisions.

Industry sectors and divisions, like major occupational groups, provide a convenient shorthand for parents and young people to use in analyzing the job market and in thinking about career possibilities. The Bureau of Labor Statistics uses the same categories when it makes employment projections. I use the same industry categories to discuss career opportunities in the rest of this book.

Goods- and Service-Producing Sectors

There are ten major industry divisions–nine if retail and wholesale trades are combined, as they sometimes are. The divisions are divided into two major sectors, service- and goods-producing industries. It is first useful to differentiate between these two because, as the next chapter reveals, employment trends and projections differ greatly for goods- and service-producing industries.

Both industry sectors consist of several divisions. For example, services is a division within the service-producing sector. That need not be confusing, as will become evident below. Each industry division, in turn, consists of groups of industries. For example, the services division includes groups of business services; personal, automotive, and other services; legal services; education services; social services; and health services. Finally, each group of industries consists of many individual industries. For example, the health services industry includes physician offices, dentist offices, osteopathic physician offices, other health practitioner offices, nursing and personal care facilities, hospitals, medical and dental laboratories, outpatient care facilities, and health and allied services that are not classified elsewhere.

For purposes of career planning we are most interested in industry sectors and industry divisions. The following descriptions give a more complete picture of each industrial division, first for service-producing industries and then for goods-producing industries.

Service-Producing Industries

There are about 105 million people in the work force. Three-fourths work in the service-producing industrial sector.

Transportation, Communications and Public Utilities. This is a grab bag of industries that are grouped together because they provide public services and, at least in the past, they were owned or regulated by public agencies. These industries provide transportation services: airlines, bus companies, trains, and other forms of public transit; broadcast by radio, television and satellite; and provide water, electric, sewage and disposal services.

Transportation companies and warehousing services–trucking services, airlines, and railroads–employ more than half the workers in this industry sector. Communications industries employ another fourth, and public utilities employ the remaining fifth of workers. The number of workers totals 5.2 million.

Wholesale Trade. Wholesalers assemble goods in large lots for distribution to retail stores, industrial firms, and institutions such as schools and hospitals. Examples of companies in wholesale trade include petroleum distributors who deliver gasoline to service stations, plumbing suppliers who sell fixtures to hardware stores, and poultry dealers who sell chicken meat to grocery stores. A fourth of all people who work in the trades work in wholesale trades, 5.7 million people. Most work for distributors.

Retail Trade. Companies in retail trade sell goods in smaller quantities directly to consumers in stores, by mail, and through door-to-door selling. Items sold by wholesale and retail businesses include almost every item produced by manufacturers: automobiles, clothing, food, furniture, toothbrushes, and countless other products. About three-fourths of workers (17.8 million) in the trades work for retail trade businesses. The majority hold jobs in department stores, food stores, and restaurants.

Finance, Insurance, and Real Estate. Nearly every person and organization uses services provided by this industry division. Financial institutions–banks, savings and loan companies, and consumer-credit organizations–offer services ranging from checking and savings accounts to stock and bond transactions. Insurance companies protect individuals and businesses against loss by fire, accident, sickness, and death. Real estate firms sell and rent buildings and property, and manage large office and apartment buildings. This division employs 6.3 million people. Half work in finance; another third work in insurance; and the remainder hold jobs in real estate.

Services. Services is a subgroup within the service-producing sector. This industry division is a diverse group of businesses that provide services to people. It includes services in hotels, barber shops, automobile repair shops, business services, laundry and dry cleaning plants, hospitals, computer software firms, and nonprofit organizations. These jobs are found in large corporations and government agencies as well as in one- or two-person firms.

Health services–hospitals, physicians' and dentists' offices, and other medical services such as laboratories and clinics–employ a third of the workers in this division. Business services–including advertising and employment agencies, auto repair services, and computer software firms–employ about one out of every six workers.

Government. Government includes such diverse areas as postal services, park and forest services, police and fire protection, social security and public welfare services, and judicial and legislative activities. It does not include public education and health services. Government employees work in large cities, small towns, and in such remote and isolated places as lighthouses and forest ranger stations. A small number of federal employees work overseas. State and local governments–county, city, township, or school districts–employ five out of six government workers. The remainder work for the federal government.

Goods-Producing Industries

Employment in goods-producing industries peaked in the late 1970s, then suffered losses in the the recessions of the early 1980s. Today, less than 28 million people, a fourth of all workers, are employed in goods-producing industries.

Agriculture. For decades agriculture meant agricultural production or farming. But today agriculture encompasses more than just farm production. Farms, plant nurseries, cattle feed lots, chicken hatcheries, crop spraying, horticultural services, commercial fishing, and forestry are all examples of agricultural industries. Nine out of ten workers in the agriculture industry work on farms or in farm-related businesses, and over half are self-employed farmers or unpaid family workers. Only one out of ten works in commercial fishing and forestry.

Mining and Petroleum. Mining and petroleum industries provide the raw materials and energy sources for industrial and consumer use. Metal mines produce iron, copper, gold, and other ores. Quarrying and nonmetallic mining yields basic materials such as limestone and gravel that are used in school, office, home, and highway construction. Nearly all of the nation's energy for industrial and home use comes from oil, gas, and coal.

Three-fifths of all workers in this sector work in the exploration and removal of crude petroleum and natural gas. Coal mining accounts for a fifth of the industry's workers.

Contract Construction. This industry division divides into three broad categories. General building contractors build houses, apartment buildings, industrial plants, and office buildings. Heavy construction contractors work on large projects such as bridges, dams, missile facilities, radio and television towers, highways, sewers, and swimming pools. Special trade contractors specialize in one aspect of construction such as excavating, air conditioning, dry walling, roofing, or plumbing and heating. Special trade contractors employ more than half of all workers in construction industries. General building contractors employ over a fourth of the workers, and the remaining work for heavy construction contractors.

Manufacturing. Almost everything we use for work, leisure, even sleep is manufactured. Factories produce goods that range in complexity from simple toys to intricate computers, and in size from miniature electronic components to gigantic aircraft carriers. Manufacturing industries are diverse and employ workers who process foods and chemicals, print books and newspapers, spin and weave textiles, make clothing and shoes, and produce thousands of products needed for our personal and national welfare.

Manufacturing is divided into two broad categories, durable goods and nondurable goods. Three-fifths of manufacturing employees work in plants that produce durable goods such as steel, machinery, automobiles, and household appliances. The rest produce nondurable goods including processed food, clothing, and chemicals.

The next chapter projects employment in terms of occupational groups and industry sectors and divisions. Before turning to those projections, however, I share some information on another subject that is very much on the minds of many young people: the prospects of becoming a professional athlete.

Pro Athletes

Several years ago Dr. William Spady published an article titled "Lament for the Letterman." In the article Dr. Spady showed that participation in high-school athletics had negative effects on young men's later careers. "Lament for the Lettermen" prompted me to do a series of studies on how participation in various kinds of extracurricular activities affects young people. Those studies indicate that participation in most extracurricular activities, but not athletics, has a wholesome effect on young people.

More recently, during a "MacNeil/Lehrer News Hour" broadcast, a reporter asked a number of young athletes what they thought their chances were of making it to the pros. Most thought that their chances were pretty good. Even the most modest youngster thought that he had at least a 50-50 chance of making it to the National Basketball Association.

But do you know what the real odds are of a youngster making it to the pros? More like 1 in 20,000–a long way off from 50-50! And the chances of making it really big are about 1 in a half million.

Probably most people who have ever thrown, caught, bounced, kicked, or hit a ball have entertained a passing fantasy of doing it for a living. It's exciting. It looks like fun. Television, of course, fuels the fantasy. The grand slams, the slam dunks, and the hail Mary's are played and replayed to the adulation of thousands of fans and millions of home viewers. The color and pageantry of big athletic events are well suited to the camera lens, and telephone calls from the President and team visits to the White House exalt championships to the status of national events. Games blur into real life right before our very eyes.

Unfortunately, the cameras in the Goodyear blimp capture only selected parts of the whole picture. The cameras aren't turned on during the hours and days and years of grueling workouts, and they stay focused at a sufficient distance or for a short-enough time so that not too much blood shows on the tube. Producer's good taste and sponsor's commercials shield the viewer from seeing real hurt and real pain, only an occasional spasmodic kick from a pummeled body to authenticate that "its really war down there in the trenches."

The prospects of a career as a professional athlete are illusory except for very, very few.

When the hype is set aside, the prospects of a career as a professional athlete are illusory except for very, very few. The question I ask in this section is: what do you say to, what do you do about the young person who dreams of being a professional athlete? Before answering it, let's look at some realities.

What Are the Odds?

State High School Associations together with the National Federation of State High School Associations administer more than 30 competitive high school sports programs. Most athletes, of course, are boys; and most of the boys participate in one of three sports: football, basketball or baseball. In any given year, about:

1,000,000 boys play high school football
500,000 boys play high school basketball
400,000 boys play high school baseball

Roughly, one of four boys participates in sports in high school–that is, at least gives it a try.

By the time a young person reaches college, the numbers are reduced dramatically. In any given year, there are only about 110,000 collegiates who play football, basketball or baseball. Only about one of every 80 or 90 boys or one of every 16 or 18 high school athletes ever plays college ball. Only one or two players on any high school team ever play college ball.

Only 5 or 6 percent of high school athletes make it to college teams–roughly 1 percent of all young men. Of those who do play college ball, only about 8 percent are ever drafted by professional teams. Only about 1 percent of young men who played on high school teams will be drafted by the pros.

But being drafted is still a long ways away from the popular image of being a pro. Of those who are drafted, only 2 percent ever sign a professional contract. At this point the odds are down to about 2 of every 10,000 high school athletes ever sign a professional contract. Thus, for example, only about 1 percent of college football players ever make it to the National Football League.

To put it all in perspective, the chances of a high school student every being a professional football, basketball, or baseball player are about 1 in 20,000, and the chances of a high school athlete ever becoming a pro are about 1 in 5,000. Incidentally, "making it to the pros" usually does not mean making it to the NFL, the NBA, or the major leagues. Usually it means making it to the minors, no more than that.

One more sobering thought: the gifted athlete who makes it to the pros is likely to be out of sports within four years.

Recruitment of New Players: Team Sports

Television displays an endless menu of athletic events, but most of them are amateur sports. The players don't make a living at it. Very few athletes ever make a living at such individual sports as track, swimming, gymnastics, bowling, boxing, tennis, rodeo, horse racing, automobile racing, or golf. Most pros make the pros in team sports: football, basketball, baseball, and hockey. Some make it in the individual sports of golf and tennis.

Baseball. There are 26 professional baseball teams and there are 725 players on the major league roster. Players enter professional baseball either through the college draft or as free agents in tryouts.

The major league draft takes place in June. To be eligible a player must be 18 years old or have completed high school. If a person enters a 4-year college, he is eligible for the baseball draft after his junior year or when he is 21 years old. The number of players drafted each year depends on how many good players are considered prospects by major league teams. Drafting takes place by rounds, and a round consists of each of the 26 major leagues having a chance to choose a player, after which the next round begins. Usually, there are between 25 and 50 rounds. Players drafted in the first 10 rounds have the best chance of making it in pro baseball.

But "making it" means making it to the minor leagues. There are some exceptions, but very rarely does a player bypass the minors and go straight to the majors. They aren't ready. They haven't learned the necessary skills. Even Bo Jackson spent time in the minors.

The minors are the proving grounds for aspiring professional baseball players. There are 164 teams with about 25 players on each team for a total of about 4,000 minor league players. Virtually every player drafted will spend a few years in the minor leagues. That will be the extent of the professional baseball career for most of them.

Basketball. The National Basketball Association has 23 teams, each with a 12-person roster, for a total of 276 professional basketball players. As with baseball, players enter the pro ranks either through the college draft or as free agents. Most players eligible for the draft have completed their college eligibility and are seniors, though there are hardship provisions which allow a player to declare his eligibility earlier. J. R. Reed of the North Carolina Tarheels was a recent example. Every year teams from the National Basketball Association draft 161 players. About a third, say 55 players, make the teams. By midseason the number is down to about a fourth, 40 to 45.

Although the National Basketball Association has no formal minor league, the Continental Basketball Association and the European teams function somewhat as minor leagues. These teams provide playing time and experience for the few who want another chance at the NBA. Most players give themselves two or three years to prove themselves and be picked up by the NBA. Most then call it quits and get on with their lives.

Football. The National Football League fields 28 professional teams. Each team has a roster of 45 players for a league total of 1,260. Professional football teams use the draft and tryout camps to recruit players. The draft is held each spring for college players who have completed their collegiate eligibility. About 15,000 players are eligible each year. Each of the 28 teams is allowed to choose 12 players for a total of 336 drafted players. About two-thirds of the players come to the pros through the draft. Another third enter through tryout camps. In a typical year, about 1 out of every 100 eligible college players will make it to the rookie list on a professional team roster.

Hockey. There are 21 professional National Hockey League (NHL)teams. Each carries a roster of 24 players for a total of 504. Players enter the league either through the draft or as free agents. The draft is held each June. Eligible players must be 18 years old or have completed high school. The draft goes for 12 rounds during which the teams choose 252 players. About 85 percent of players enter the league through the draft. Another 15 percent make their way as free agents through tryouts. About half of those who make the draft come from the Canadian Junior Leagues, about a fourth from U.S. colleges and high schools, and the remainder come from international hockey leagues.

Only about a fourth of those drafted make the National Hockey League roster during their first year. Most play for a few years in the minor leagues, the American Hockey League or the International Hockey League, to refine their skills. They usually sign 3-year contracts with minor league teams during which they hope to make it to the NHL, though the odds are against it.

Individual Sports

Individual sports such as golf and tennis are usually governed by associations that manage competition and establish rules of eligibility. An athlete's ability is, of course, the key determinant of professional status because individual sports have neither drafts nor tryout camps. Each sport establishes its own rules of eligibility.

Golf. Professional golf is governed by the Professional Golf Association (PGA) and the Ladies Professional Golf Association (LPGA). Only about 350 men regularly compete on the PGA tour and about 270 women compete on the LPGA tour.

The PGA and LPGA use basically the same procedures to certify players who can compete on the tour. There are 9,000 members of the PGA, but to compete on the PGA Tour a player must have a Tournament Player's Card. The Card may be earned in one of two ways. A player can be among the top finishers in the annual PGA Tour Qualifying Tournament or earn an amount of money from Non-Tour Tournaments equal to the amount of money earned by the 150th ranked winner of the previous year.

Players who have earned a Tournament Player's Card must still qualify to compete. Players who have won previous specified tournament victories or are ranked on the tour are exempt from the requirement that they qualify in competition in a qualifying round held the Monday before a tournament. Only a limited number "make the cut" and qualify for the tournament.

Tennis. Unlike most sports, there is no minimum age requirement that must be met to compete professionally in tennis. Ability, not birthday, is the deciding factor, and that explains why there are some very young players in the Association of Tennis Players (ATP) and the Women's Tennis Association (WTA).

Men's tournaments are governed by the ATP, which lists a membership of about 1,100 players from around the world but primarily from the United States. The ATP ranks players. About a third of the ranked players play the circuit full time. The governing body of women's professional tennis is the WTA. About 400 players regularly play its tour.

A player's ranking is based on the player's earnings and the tournaments in which the player competes. There are about 300 tournaments that are used in the ATP rankings. To be eligible for associate membership in the WPA a player must either have earned $500 in one of the past two years or, if the player is an amateur, the player must have earned $500 in sanctioned tournaments. Full membership requires that a player earned $15,000 in competitive tennis in one of the last two years or be ranked among the top 100 players by the WTA.

Bowling. Requirements for becoming a professional bowler are established by the Professional Bowlers Association of America (PBA). To qualify for professional status a bowler must be 18 years old or be a graduate from high school and must post an average score of 190 for two consecutive years of league play. The PBA has a membership of nearly 3,000 and about 150 classified touring pros. Touring Pro status makes a bowler eligible for regular competition on the PBA and National Tour.

Boxing. Professional boxing is an international sport and a sanctioned Olympic sport, but it is legal in only 17 of the United States, and each state establishes its own requirements for becoming a professional boxer.

Not only do young people grossly miscalculate their chances of becoming a professional athlete, they also seriously overestimate the life-styles that most professional athletes maintain.

There is no set career path or rules of eligibility for becoming a professional boxer. Normally, a boxer works his way through the amateur ranks which probably begins at a local club and progresses to the Golden Gloves competition. Fighters who show promise may be recruited by a professional boxing trainer or manager who will help the fighter develop his skills to become a pro.

Worldwide, as many as 20,000 boxers may fight in any given year. Most fight once and quit. Ring magazine, which is generally recognized as the authoritative magazine for the sport, ranks the top 10 fighters in each of 15 weight classes. Fewer than half of the ranked fighters in each weight division make a decent living at fighting. Even a good fighter is lucky to make an average workman's wage in a year in the ring. The Mike Tyson and Sugar Ray Leonard multimillion dollar paydays are truly the exception.

Automobile Racing. There are several kinds of races and race cars, and there are several organizations that regulate automobile racing. The International Motor Sports Association (IMSA), for example, sanctions races around the world. It licenses about 2,000 drivers including most of the top-ranked drivers in the U.S.

Most racing associations require that all drivers attend a professional driving school. Nearly all successful drivers are members of a racing team that has a corporate sponsor. Racing is good advertisement for major corporations, it gives them TV time, and it takes a major corporation to keep a car on the track. Probably no more than 20 percent of the membership of IMSA makes a living from automobile racing.

Racing is one of the most difficult sports to enter. Most drivers of Indy cars, for example, have worked their way up from go-carts through dirt tracks and formula cars. Financial backing is a must, and many racing families–for example, the Allisons, Andrettis and Unsers–have been able to keep the sponsorship in the family or to use their networks to gain it.

Horse Racing. People who aspire to be jockeys usually go through various stages, from groom to walker, walker to exercise boy, exercise boy to apprentice jockey, and apprentice jockey to jockey. About 3,000 jockeys ride each year

Horse racing is probably the most regulated of all sports, and each position, from groom to jockey, requires a license.

There is a practical physical limitation for jockeys. In no other sport is weight so important, and 120 pounds is about the absolute upper limit to what a competitive jockey can weigh. Most jockeys weigh between 110 and 115 pounds.

Rodeo. There are more than 600 rodeos around the country each year that are authorized by the Professional Rodeo Cowboys Association (PRCA). The PRCA lists more than 5,000 members, but fewer than 200 follow the rodeo circuit full time. Few if any riders make a living at the sport.

The requirements for being a professional rider are simple: the rider must purchase a permit that allows him to compete, and then the rider must win at least $2,500 in a 1-year period.

Money in Sports

Not only do young people grossly miscalculate their chances of becoming a professional athlete, they also seriously overestimate the life-styles that most professional athletes maintain. Of course, this misconception is also part of the media myth. Every young aspiring basketball player knows that Larry Bird signed a contract for 6 million dollars after spending most of a year on the Celtics disabled list. But how many Larry Birds are there? One.

In reality, professional sports is a 2 or 3 tier system with huge salary gaps between the tiers. No more than 5 percent of the pros are in the Larry Bird category, and they are the players who have beaten two sets of odds. First of all, they are truly the superstars. Second, the superstars have been around far longer than the average player. Such athletes are very few and far between.

In 1985, the last year for which I have reliable information, the average salary for players in the National Football League was $193,000; the average salary for players in the National Basketball Association was $320,000; and the average salary for players in major league baseball was $371,000. There were also minimum salaries paid: $75,000 in the National Basketball Association, and $60,000 in the National Football League and major league baseball. I would guess that average salaries are about a third higher today.

Remember, however, that there are only 1,260 players in the NFL, 725 in major league baseball, and 276 players in the NBA. Most pros are in the minor leagues, and minor league salaries are much less than those in the majors. In minor league baseball, for example, a player in the A League makes about $700 a month during the season plus $11 a day for meal money. That's less than the average typist makes per month. In basketball, a player in the Continental Basketball Association makes about $450 per week for the 14-week season. That's a total of $6,300 per year.

Earnings in individual sports are less. Team athletes have room, board, and transportation expenses covered while on the road, but pros in individual sports have to pay as they go. My guess is that it costs a pro tennis player or golfer at least $2,500 to compete in an event–that's for a week on the road with associated costs. In addition, athletes in individual sports have to cover their own workout costs, equipment costs, insurance premiums, and the like.

In 1985 nearly 25 million dollars was distributed to professional golfers. But that money was far from equally distributed. The number one player in the PGA earned more than $500,000; the 100th ranked player won about $75,000; and the 200th ranked player won only $6,000. In 1986 about 12 million dollars in prize money was distributed in the LPGA. More than a third of that amount went to the top 10 players. The number one ranked player earned more than $400,000. The 100th ranked player, who participated in more tournaments than the number one money winner, earned only $15,000.

In 1986 the number one ranked tennis player, Ivan Lendl, earned more than $900,000 by mid-September, but the player ranked 100th earned less than $40,000 over the same period, not enough to cover his expenses for the full season. In 1985, women's tennis prize money totaled more than 12 million dollars. More than 25 players earned more than $100,000. The number one player, Martina Navratilova, won nearly 2 million dollars. The 50th ranked player won about $50,000. The 100th ranked player earned $25,000. And the number 300th ranked player earned $5,000.

Advertising Contracts. There is yet another myth about professional athletes, that they all make a lot of money doing advertisements. Some do, but most don't. My recent issue of Golf Digest includes a feature article titled "Exclusive: How Much the Pros Really Make." The big three in off-course income endorsements and appearance money are Arnold Palmer, $9 million; Greg Norman, $8 million; and Jack Nicklaus, $7 million. That's a lot of money, no question about it. But by the time you get to Ben Crenshaw, the endorsement money is down to $600,000. My guess is that it drops precipitously thereafter.

Length of a Career

The odds of making it to the pros are pretty slim, as is the pay for most pros. Moreover, a pro career is pretty short. The average length of a career in the National Basketball Association and the National Football League is less than four years. It's a little longer in major league baseball.

In addition, competition for positions is intense. It never ends. In a recent television interview Mike Tyson observed that "Somewhere out there is a little boy who will someday beat me." There is always a younger athlete out there waiting for the chance to take the position. That means that being a professional athlete is a year-round job. It means being in the training room every day, off-season as well as in-season. There is not a lot of time off. It's a full time job.

Another consideration: the injury rate in the National Football League is 100 percent. Every player receives at least one injury every season, and any one of those injuries can end a career.

I Want to Be a Pro

The odds are strongly against anyone making it to the pros. Those who do make it are in the minors, have a very short career, and are not paid well. About 5 percent, 1 in a half million youngsters, are the fortunate few that make it "big time."

Urge every young person to have contingency plans, something they can fall back on if their first choice doesn't work out.

So, what do you say to, what do you do about the youngster with stars in his eyes? I would suggest the following. First, there are useful experiences and lessons learned from sports, especially team sports. Why throw a wet blanket on youthful dreams and experiences? Second, notice that most young people sort things out for themselves with a little help from teammates, coaches, and opposition teams. Sitting on the bench or being an average player on an average team is a message that they aren't pro material, and nobody has to tell them that. Third, I would not, however, let a young person delude himself or herself with the notion that their chances of making it to the pros are something like 50-50. In fact, if you take into account all pros who are already on the pro rosters, I would guess that not even their average chance is 50-50 of making it next year. Young people, even the most gifted young athletes, need to understand that the prospects of making it to the pros is a long shot. A college graduate in Dallas with a degree in political science put it this way: "Prepare them for the realities of life. Not everyone will grow up to be President"– or, we could say, a professional athlete.

That brings me to the last and most important point. I wouldn't discourage a young, budding professional athlete–no matter how starry-eyed he or she may be; but I would urge every young person to have contingency plans, something they can fall back on if their first choice doesn't work out. It is possible to pursue two career-preparation tracks at the same time. The close association between colleges and sports makes that easier. It's also easier to talk young people into having a contingency plan than it is to talk them out of something they want so badly. Don't deprive them of their dreams; but do help them find an alternative that also interests them. Chances are they're going to need it.

Five

Employment Projections for the Year 2000

For eighty years, ever since Frank Parsons wrote *Choosing A Vocation* in 1909, career counselors have followed a three-step model when they advise young people about choosing a career:

> Develop a clear understanding of yourself: your abilities, interests, aptitudes, resources, limitations and other qualities.
>
> Learn about different lines of work: what is required for success, advantages and disadvantages of each line of work, levels of compensation, opportunities and prospects.
>
> Follow "true reasoning" to match your individual traits with occupational characteristics.

Parson's three-step approach may have been adequate at the turn of the century–back when agriculture was the nation's largest industry, the Ford Motor Company wasn't yet a gleam in Henry's eye, and words like "computer", "television", "microwave oven", "satellite communication," and "ballpoint pen" may have been in the dictionary but nobody knew what they meant. But it's not enough for today's young people to match what they are good at with what workers do in certain occupations, and young people sense that. A personnel and labor relations worker with a college major in sociology told us: "I guess as far as jobs and careers goes I have a very limited knowledge of the labor market, what jobs are available and who employs these people." A sales worker for a publishing company in Ohio felt the same way: "I was totally lacking in knowledge regarding careers, except what my father did (an engineer) and my mother did (homemaker)."

We live in a rapidly-changing society, and young people choosing careers have an advantage if they are aware of labor-market trends. That's what this chapter is about.

Knowing young people's interests and abilities helps parents give them direction, and that's important. But social, political, economic and technological developments determine where the job opportunities are, and that's important too. An accountant for an electric utility company put it this way: "Jobs, opportunities, and standards of living are based on the economics of supply and demand, not merely the years spent in educational institutions."

Fortunately, the forces that shape demand for workers develop over a period of years. For example, the fall off of employment in agriculture isn't something new. It's been going on for eighty years at a rate of decline of about one percent per year. Identifying areas of opportunity and decline isn't just somebody's guessing game. The labor force leaves footprints that show us the general direction things are headed. That makes it possible to take labor-force trends into account when choosing a career.

One of the most frequent problems young adults told us they had was not knowing where the job opportunities would be. A lawyer's daughter who works as a teacher's aid in Oregon told us: "I happened to prepare for a field that had a saturated market by the time I was ready for employment (education), and in retrospect I wish I had understood this and had proper counseling. It might have been avoided." A therapist in California felt the same way. What might be done to help young people prepare for the future? She answered: "The job market at present and future should be researched by school counselors so that instead of just saying 'you'd make a good teacher,' they could tell students that 'in two years, there will be X number of openings in X fields' (as best as can be predicted)."

Fortunately, there are labor-force projections to guide today's young people. The projections have been accurate and they are available publicly.

Labor-Force Projections

Hindsight may be twenty-twenty vision. Unfortunately, foresight can never make that claim. Nonetheless, there is good information available to inform young people about the employment outlook. The Bureau of Labor Statistics develops projections that take into account social, political, economic, and technological changes.

Every two years the Bureau of Labor Statistics develops three different sets of estimates that provide a range of projections. The projections take into account assumptions about population growth; about how labor-force participation may continue or change for age groups, men and women, and racial groups; and about how government fiscal policy, growth and productivity, unemployment rates, and price levels will effect employment.

The projections are based on alternative sets of assumptions about the growth and changing composition of the population, labor force, gross national product, industry employment, and occupational employment. The three different ways of calculating projections yield three different sets of projections for the year 2000: high, moderate, and low growth projections. The high-growth projections are based largely on assumptions that the economy will continue to grow as it did in the 1960s when the annual growth rate increased about one-third. The low-growth projections are based on notions that the economy will grow at about the same pace as it did over the 1970s and early 1980s, which was relatively slow.

I use the moderate growth projections. These are some of the basic assumptions on which the moderate projections are based:

> The unemployment rate will stay at about six percent.
>
> The nation's defense expenditures will stay level or gradually decline.
>
> State and local governments will increase expenditures for education as the number of school-age youngsters increases.
>
> There will be an increase in worker productivity as the age of the labor force increases.
>
> The value of the dollar will remain relatively low in international money markets which will improve the international balance of trade.
>
> There will not be a major war, oil embargo, national catastrophe, or other major economic shock.

Major Trends

Following is a broad-brushed portrait of how the labor force will change from the year 1986 to the year 2000. I use tables and graphics so that trends and comparisons can be seen more easily. Starting with the year 1986 doesn't mean that the information is old. It takes two or three years for the Bureau of Labor Statistics to analyze and sort out major trends, and this information is the most recent available as I write this chapter.

There are fourteen years between the year 1986 and the year 2000, about a decade and a half. I will make comparisons with the preceding decade and a half, the years 1972-1986, so that you can get some sense of where things have been headed and where they are likely to go over comparable time periods. I will be discussing the labor force over, roughly, the period 1970 to the year 2000, pointing out how things have changed over the last fifteen years and how they are likely to change over the next ten to fifteen years.

Size and Composition. The labor force will continue to increase in size. It will grow by about twenty-one million workers between 1986 and the year 2000. That will be an eighteen percent growth rate, which will be slightly slower than it was over the past decade and a half.

The composition of the labor force will change in important ways:

> Younger and older workers will make up a smaller share of the labor force.
>
> The proportion of the labor force that will consist of majority-culture Whites will decrease whereas the proportion that consists of Blacks, Hispanics, and Asian Americans will increase.
>
> The proportion of the labor force made up of women will continue to increase.

Industries and Occupations. As noted in the previous chapter, it is useful to think of employment in industries in terms of sectors, divisions, and groups. The two major industry sectors are service- and goods-producing sectors. Of the two, by far most of the growth, twenty million new jobs, will occur in the service-producing sector.

Compared with the service-producing sector, employment in the goods-producing sector will be flat.

Every industry division in the service-producing sector will continue to grow but of the six, four will grow faster than average. Two divisions, services and retail trade, will provide three-fourths of the new jobs. Within the services division, more than half of the growth will be in health and business services. In the retail trade division, about half of the growth will be in eating and drinking places.

Compared with the service-producing sector, employment in the goods-producing sector will be flat. Overall employment in goods-producing industries will decline by about five percent. In the goods-producing sector, only construction will increase in size.

Occupations, like industries, will continue to grow–about nineteen percent from 1986 to the year 2000. Here are some basic trends:

> More than half of the total growth in occupations will occur in a relatively small number of occupations.
>
> Of the major occupational groups, the fastest growing will be technician and service occupations.
>
> Twelve of the fastest growing occupations will provide health services.

> Some occupations will decline in growth and size due to changes in technology, business practices, and increased use of imports.

The occupational groups that will show the most growth will also require higher levels of education. Workers with higher levels of education will enjoy higher earnings. They will also benefit from lower unemployment rates.

Changing Demand For Goods And Services

The gross national product (GNP) is a measure that the government uses to assess how much demand there is for goods and services. For example, in 1986 the GNP was $3,679,000,000,000 ($3,679 billion or 3.6 trillion dollars). In 1972 it was 2.6 trillion dollars. In the year 2000 it will be 5.2 trillion dollars. The percentage of GNP growth over the next decade and a half (40 percent) will be about the same as it was over the past decade and a half.

Every major category in the GNP will grow (Table 5:1). Moreover, except for exports, which will grow considerably faster, and federal, state, and local government, which will grow much slower, growth in the major categories will be comparable at about forty percent.

Table 5:1. Projected Growth by Major GNP Categories, 1986-2000

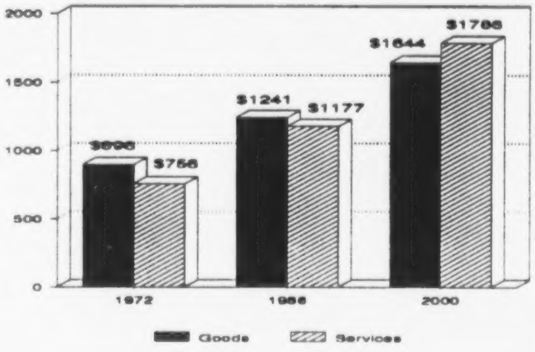
Category	1986 (Billions)	2000 (Billions)	% Growth (1986-2000)
Personal Consumption Expenditures	$2,419	$3,429	42%
Gross Domestic Private Investment	$660	$932	41%
Exports	$371	$635	71%
Imports*	$521	$733	41%
Federal, State, and Local Government	$748	$898	20%
Total Gross National Product	$3,679	$5,161	40%

*Imports are subtracted from the other major categories

Note that the largest component of the GNP is personal consumption expenditures. In 1986 personal consumption expenditures accounted for two-thirds of the Gross National Product, more than all other categories combined.

The pattern of personal consumption expenditures continues to shift from goods to services. Goods include automobiles, furniture, food, clothing, gasoline, and fuel oil. Services include, health care, education, utilities, and transportation.

Figure 5:1. Personal consumption of goods and services, 1972, 1986, and 2000 (estimated); dollars in billions



There are two basic trends in consumer expenditures that have profound effects on employment opportunities as we look towards the year 2000:

> Overall expenditures (GNP) will continue at about the same rate.
>
> Although personal consumption expenditures for both goods and services (the largest component of the GNP) will continue, there will be a continuing shift towards expending proportionally more for services and less for goods (Figure 5:1).

These patterns will affect employment opportunities in the years ahead. In the sections that follow I show how the change in demand for goods and services will affect employment opportunities in industries, in industry groups, and in major occupational groups. But first there is a very important point to be made: the difference between rate of growth and number of employment openings.

Growth Rate vs. Number of Openings

A change in the rate of growth does not necessarily mean that there will be many or few employment openings. How many openings depends primarily on the size of the industry or occupational group, not its growth rate.

Suppose, for example, that there are two companies in a small town. Company A employs 100 people, and company A's annual report projects a 50 percent increase in the number of jobs. A 50 percent increase is spectacular!–three times the projected growth of the total labor force. Company B, by comparison, employs 750 people, and its stockholders are told that company employment will increase only 10 percent, which is little more than half the growth projected for the total labor force.

If parents and young people look only at growth rates, they will conclude that company A offers more employment opportunities than company B. But that isn't so. Company A, with its 100 employees and its spectacular 50 percent employment growth projection, will offer only 50 new jobs; whereas company B, with its 750 workers and its projected growth rate a lackadaisical 10 percent, will offer 75 new jobs. The point is that growth rates can be deceiving. A smaller growth rate in a large industry or occupational group often offers more employment opportunities than a high growth rate in a small industry or occupational group. When it comes to projecting employment opportunities, beware of the high flyers.

The media often confuses growth rate with number of employment openings.

I make this point, and I will make it again later, because the media often confuses growth rate with number of employment openings. In its efforts to "make news" it has a tendency to focus on fast-growth industries and emerging occupations, what I call the "high flyers"–like laser/electro-optics. That happened a few years ago with the media's infatuation with hi-tech and computers. The spectacular growth rates were for small industries and never did translate into the phenomenal number of employment opportunities we were lead to believe would occur. Growth rate and number of employment openings are not the same.

Replacement Needs. Size is important for another reason. Most employment opportunities do not occur from growth and new jobs. Most job openings occur when workers retire, die, or change jobs. Ninety-five percent of all job openings occur when workers must be replaced. Less than two million openings per year occur from real growth. Although the rate of replacement may vary from one industry to another and from one occupational group to another, it is almost always the case that large industries and large occupational groups have higher replacement needs than do small industries and small occupational groups.

The fact that most employment opportunities occur in large industries and large occupational groups is encouraging to young people who want to enter occupations with low employment projections. Remember: if the industry or occupational group is large, there still may be many employment opportunities even if the projected growth rate is low because replacement needs provide most job openings.

Projections. It is never certain that the economy and employment will develop as projected. Projections are always based on assumptions–there are always "ifs" involved–and that applies to these projections too. I emphasize that projections are not predictions, not forecasts, and certainly not prophecies. There is no hidden or secret knowledge in projections.

Most employment opportunities do not occur from growth and new jobs. Most job openings occur when workers retire, die, or change jobs.

But neither are projections guesswork. Projections take past trends and extend them into the future. To the extent that the trends continue, the projections will hold. So, when I say "there will be" or "an industry or occupational group will grow," regard the statements as careful calculations, but not as gospel truth. Parents and young people will want to regard projections as possible and expected growth rates, but never as certainties.

Changing Employment in Industries

Industries identify the broad fields of activity in which employers are engaged. Industries are divided into two sectors, service- producing and goods-producing. Each sector, in turn, can be split into divisions. Thus, the goods-producing sector consists of four divisions: agriculture, forestry, and fishing; mining; construction; and manufacturing. The service-producing sector consists of six divisions: transportation, communications, and public utilities; wholesale trades; retail trades; finance, insurance, and real estate; services; and government. Finally, each division consists of several groups of industries.

There will be continued employment growth in industries, and the growth rate will continue at about the same rate that it has since 1970. However, the growth will be more uneven across industries than it has been in the past. Almost all of the 20 million new jobs will occur in the service-producing sector (Figure 5:2). The goods-producing sector will lose ground.

Figure 5:2. Industry sector growth 1972-1986 and projections for 2000; employment in millions

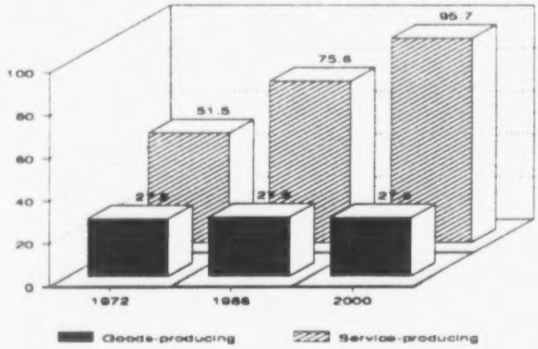


Table 5:2. Service-Sector Employment 1972-1986 and Projections for 2000

Industry Division	1972 (millions)	1986 (millions)	2000 (millions)	% Growth (1986-2000)
Transportation, Communications, and Public Utilities	4.5	5.2	5.7	9.1%
Wholesale Trade	4.1	5.7	7.3	26.7%
Retail Trade	11.8	17.8	22.7	27.2%
Finance, Insurance and Real Estate	3.9	6.3	7.9	25.7%
Services	13.8	23.8	33.8	42.0%
Government	13.3	16.7	18.3	9.7%

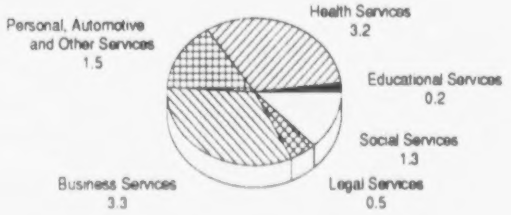
Service-Sector Growth

Without exception, every industry division in the service-producing sector will continue to grow (Table 5:2). Four of the industry divisions will grow faster than average and one, services, will grow much faster than average.

Services alone will contribute 50.6 percent of the growth in the service-producing sector; and retail trade will provide 24.6 percent of the growth. Together services and retail trade will account for three-fourths of the job growth in the service-producing sector.

Within the services division, which consists of six industry groups, two-thirds of the growth will be due to growth in two groups of industries, health and business services. Figure 5:3 compares the relative projected growth of the industry groups in the services division.

Figure 5:3. Projected growth in industry groups in the service division, 1986-2000



Four individual industries in the services division are the fastest growing in the economy and will increase in employment by at least 70 percent. They are:

Computer and Data Processing Services

Outpatient Care Facilities

Offices of Physicians, Including Osteopaths

Personnel Supply Services, Including Temporary Help Supply Services

A fourth of the job growth in the service-producing sector will occur in the retail-trade division, and within the retail-trade division half of the growth will take place in eating and drinking places. Employment in eating and drinking places will grow more than in any other individual industry from 1986 to 2000. Eating and drinking places lead the list of growth for the top-ten-individual growth industries and will account for more than fifty percent of all job growth in the service-producing sector between 1986 and the year 2000. Miscellaneous business services will also provide many employment opportunities. Table 5:3 lists the top-ten-individual industries in growth and their projected employment growth through the year 2000.

Goods-Producing Sector

There are four divisions in the goods-producing sector: agriculture, forestry and fishing; mining; construction; and manufacturing (Table 5:4). Twenty-eight million people, about one in every five workers, are employed in goods-producing industries today. That number will drop to 27.6 million by the year 2000. Of the goods-producing divisions only construction will grow appreciably.

Table 5:3. Top Ten Individual Industries in Growth, 1986-2000

Individual Industry	New Jobs, 1986-2000
Eating and Drinking Places	2,486,000
Miscellaneous Business Services	1,342,000
Education, Public and Private	971,000
Offices of Physicians, Including Osteopaths	886,000
Nursing and Personal Care Facilities	847,000
Personnel Supply Services	834,000
Wholesale Trade, Machinery and Equipment	614,000
Computer and Data Processing Services	612,000
Grocery Stores	598,000
Legal Services	519,000

Table 5:4. Changing Employment in Goods-Producing Divisions, 1972-2000

Division	1972 (millions)	1986 (millions)	2000 (millions)
Agriculture, Forestry and Fishing	3.5	3.3	2.9
Mining	.6	.8	.7
Construction	3.9	4.9	5.8
Manufacturing	19.2	19.0	18.2

More than two-thirds of workers in the goods-producing sector are employed in manufacturing. Although overall employment in manufacturing will decline by about five percent over the next ten years, some manufacturing industries will grow. These four will each add at least fifty thousand new workers by the year 2000:

Miscellaneous Plastic Products

Office Computing and Accounting Machines

Commercial Printing and Business Forms

Newspapers

Changing Employment in Occupations

Industries are the broad fields of activity that engage employers. Because different industries are involved in different types of activities, different industries employ workers who have different occupational skills. Hospitals, for example, employ registered nurses, nurses aids, and workers in other occupations that provide health care. Construction, by comparison, needs brick layers, carpenters, and other building trades workers. Industry employment growth and decline, therefore, has important effects on the employment outlook for occupations. For example, the increased use of computers for record keeping increases the demand for computer programmers and computer-systems analysts, but it reduces the need for bookkeepers and record-keeping clerks.

Permit me to restate an earlier point: Employment growth can be charted both in terms of rate of growth, which is a percent, and in terms of the increased number of workers. It is important to look at both the rate of growth and numerical change because growth rates alone can be deceptive. Occupations that employ few workers can post phenomenal growth rates, but the growth rates translate into few new jobs. Growth rates can be deceptive. Number of employment openings is usually the more important consideration.

A good example is the comparison between retail sales workers and medical assistants. Retail sales is a very large work force whereas medical assistants is small. Retail sales will increase 34 percent but medical assistants will increase 90 percent over the same time period. If parents and young people pay attention only to growth rates, they would probably conclude that medical assistants is a much better career track than retail sales because the rate of growth is so much higher. But because medical assistants are a small work force, the 90 percent growth rate will yield only 119,000 new jobs. By comparison, the modest growth rate of 34 percent for retail sales, which is a large employment area, will yield 1,201,000 new jobs by the year 2000.

Occupations will grow an average of 19 percent by the year 2000 (Table 5:5). Of the major occupational groups, technicians and related support workers will grow the fastest. Other occupational groups that will show strong growth are service workers; sales workers; executive, administrative, and managerial workers; and professional workers. Employment in agriculture, forestry, and fishing will continue to decline.

Table 5:5. Change in Employment by Major Occupational Groups, 1986- 2000

Occupational Group	Percent Change 1986-2000	Numerical Change 1986-2000
Technicians and Related Support Workers	38%	1,403,000
Service Workers	31%	5,381,000
Sales Workers	30%	3,728,000
Executive, Administrative, and Managerial Workers	29%	3,033,000
Professional Workers	27%	3,655,000
Precision Production, Craft, and Repair Workers	12%	1,669,000
Administrative Support, Workers, Including Clerical	11%	2,258,000
Operators, Fabricators, and Laborers	3%	443,000
Agriculture, Forestry, and Fishing Workers	-5%	-163,000

A small number of occupations will account for more than half of the total job growth in occupations from 1986-2000 (Table 5:6). The single occupation that will provide the greatest numerical growth is retail sales workers, which will provide 1.2 million jobs. Other occupations that will provide at least a half million new jobs include waiters and waitresses, registered nurses, janitors and cleaners, general managers and top executives, cashiers, and truck drivers.

All but one of these high growth occupations are growing faster than the average for all occupations (19 percent). The one growing less rapidly, secretaries, is so large that even a small rate of growth (13 percent) yields many new jobs (424,000).

Table 5:6. Rate of Growth and Numerical Change in High Growth Occupations, 1986-2000

Occupation	Percent Growth (1986-2000)	Numerical Growth (1986-2000)
Sales Workers, Retail	34	1,201,000
Waiters and Waitresses	44	752,000
Registered Nurses	44	612,000
Janitors and Cleaners	23	604,000
General Managers and Top Executives	24	582,000
Cashiers	27	575,000
Truck Drivers	24	525,000
General Office Clerks	20	462,000
Food Counter and Related Workers	30	449,000
Nursing Aids, Orderlies, and Attendants	35	433,000
Secretaries	13	424,000
Guards	48	383,000
Accountants and Auditors	40	376,000
Computer Programmers	70	335,000
Food Preparation Workers	34	324,000
Teachers, Kindergarten and Elementary	20	299,000
Receptionist and Information Clerks	41	282,000
Computer Systems Analysts	76	251,000
Cooks, Restaurant	46	240,000
Licensed Practical Nurse	38	238,000
Gardeners, and Grounds Keepers	31	238,000
Maintenance Repairers, General Utility	22	232,000
Stock Clerks, Sales Floor	21	225,000
Clerical Supervisors and Managers	21	205,000
Dining Room Attendants and Related Workers	26	197,000
Electrical and Electronics Engineers	48	192,000
Lawyers	36	191,000

Table 5:7 lists the twenty fastest-growing occupations. The number of paralegal personnel, the fastest growing occupation of them all, will double in size. Note, however, that fast growth rate does not necessarily mean an abundance of job openings. Paralegals, for example, which leads the growth charts with an anticipated growth of 104 percent is comparatively more modest in anticipated numerical growth, 64,000. Also, note that:

Table 5:7. Rate of Growth and Numerical Growth Projections for the Twenty Fastest-Growing Occupations, 1986 - 2000

Occupation	Percent Growth (1986-2000)	Numerical Growth (1986-2000)
Paralegal Personnel	104	64,000
Medical Assistants	90	119,000
Physical Therapists	87	53,000
Physical and Corrective Therapy Assistants and Aids	82	29,000
Data Processing Equipment Repairers	80	56,000
Home Health Aids	80	111,000
Podiatrists	77	10,000
Computer Systems Analysts	76	251,000
Medical Records Technician	75	30,000
Employment Interviewers	71	54,000
Computer Programmers	70	335,000
Radiologic Technologists and Technicians	65	75,000
Dental Hygienists	63	54,000
Dental Assistants	57	88,000
Physician Assistants	57	15,000
Operators and Systems Researchers	54	21,000
Occupational Therapists	52	15,000
Peripheral Electronic Data Processing Equipment Operators	51	24,000
Data Entry Keyers, Composing	51	15,000
Optometrists	49	18,000

> Twelve of the twenty fastest growing occupations provide health services.
>
> Four of the twenty fastest growing occupations are in the computer field.

Changes in technology and business practices, changes in social and economic policy, and increased use of imports will cause some occupations to decline. Most of those occupations, incidentally, have been declining for several years.

Table 5:8 lists the twenty occupations with the projected highest decline rates. Farmers followed by farm workers lead the list reflecting the continuing decline of employment in agriculture. These two occupations alone will account for a decrease of more than a half million jobs. Two other occupations–industrial truck and tractor

Table 5:8. Rate of Decline and Numerical Decline Projections of the Twenty Occupations with the Greatest Anticipated Decline, 1986-2000

Occupation	Percent Decline (1986-2000)	Numerical Decline (1986-2000)
Electrical and Electronic Assemblers	54	133,000
Electronic Semiconductor Processors	51	15,000
Railroad Conductors and Yardmasters	41	12,000
Railroad Brake System and Switch Operators	40	17,000
Gas and Petroleum Plant and System Occupations	34	11,000
Industrial Truck and Tractor Operators	34	143,000
Sewing Machine Operators and Tenders	32	9,000
Station Installers and Repairers, Telephone	32	18,000
Chemical Equipment Controllers, Operators, and Tenders	30	21,000
Chemical Plant and System Operators	30	10,000
Stenographers	28	50,000
Farmers	28	332,000
Statistical Clerks	26	19,000
Textile Draw-out and Winding Operators	25	55,000
Central Office and PBX Installers and Repairers	23	17,000
Farm Workers	20	190,000
Coil Winders Tapes and Installers	19	6,000
Central Office Operators	18	8,000
Directory Assistance Operators	18	5,000
Compositors, Typesetters, and Arrangers, Precision	17	5,000

operators–will also experience sizeable job losses in employment. These four occupations will account for three-fourths of the numerical decline in the twenty occupations with the greatest anticipated decline in employment from 1986 to the year 2000.

Table 5:9. Growth in Employment and Levels of Schooling by Occupational Group, Age 25 - 54, March 1986

Major Occupational Group	Growth in Employment (1986-2000) %	Workers, Less Than 4 Years High School %	Workers, 4 or More Years of College %
All Workers Age 25-34	19	15	26
Executive, Administrative, and Managerial Workers	29	5	47
Professional Workers	27	1	76
Technicians and Related Support Workers	38	3	33
Sales Workers	30	8	28
Administrative Support Workers, Including Clerical	11	5	13
Srevice Workers	31	28	7
Presision Production, Craft, and Repari Workers	12	22	7
Operators, Fabricators, and Laborers	3	34	4
Agriculture, Forestry, and Fishing Workers	-5	33	9

Education and Employment

The projected growth of the major occupational groups shows the increasing demand for educated workers (Table 5:9). The occupations that are growing fastest have large proportions of workers with a college education whereas those that are growing slowest have large proportions of workers with less than four years of high school.

Career preparation is the subject of Part 3 of this book, and in chapter 8, "Does College Still Pay?", I review how levels of education relate to income and unemployment rates.

Regions of the Country

Population and labor force trends and projections differ by region of the country. In the sections that follow I examine eight geographical regions in terms of recent, present, and projected population and employment trends. By recent I mean the years since 1970. By present I refer to Census data for the year 1988. And by future I mean the year 2000.

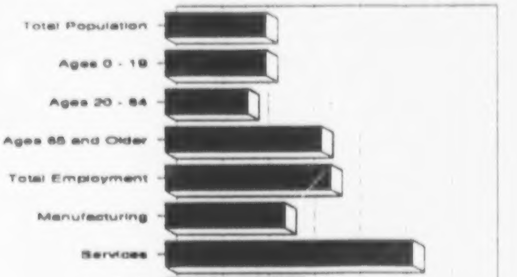
The eight regions correspond to the Bureau of Economic Analysis regions: the New England, Mideast, Southeast, Great Lakes, Plains, Rocky Mountains, Southwest, and Far West regions. I use two sets of information to map past and projected trends: Census Bureau reports and regional projections based on the Woods & Poole Economics forecasting model (see chapter notes).

The projections differ from those I used earlier in this chapter in several ways:

> These projections are for regions of the country, not for the total country.
>
> These projections are based on assumptions that the economy will grow somewhat more vigorously than projections earlier in the chapter would lead us to believe.
>
> These are projections for the manufacturing division within the goods-producing sector and for the services division within the service-producing sector, which are the two fastest growing divisions in the labor force.

The reader may find it useful to compare the regional information with national trends and projections. The total national population will grow about 1 percent per year, 11 percent from 1988-2000. The age 0 - 19 population will grow at the same rate; the 20 - 64 year old age group will grow slightly slower; and the 65 and older age group will grow half again as fast. Total employment will grow a third faster than total population. Employment in manufacturing will grow slightly faster than the population will grow, but employment in services will grow two and one-half times as fast. Figure 5:4 is a summary of national projections over the next decade.

Figure 5:4. Population and employment growth projections, 1988 - 2000



In the discussion that follows, I trace recent trends and project regional patterns through the year 2000.

New England

The New England region consists of five states: Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island and Vermont. The region is home to 13.3 million people and, together with the Plains Region, it is the oldest region of the country with 14 percent of the residents aged 65 and older.

The New England region will grow 11 percent by the year 2000, the same rate as the national population will grow. The number of people under age 20 will also grow at about 11 percent; but the number of people between the ages of 20 and 64 will grow slower, 9 percent. The number of people aged 65 and older will grow by 17 percent, and that growth will increase the size of the 65 and older age bracket from 14 percent to 15 percent of the regional population over the next decade.

The New England region's employment outlook is bright. Over the next two decades, 700,000 additional people between the ages of 20 and 64 will join the region, but 1.4 million new jobs will open. That means that half of the new jobs will be available to people under age 20 or over age 65. Over the next decade total employment will grow 18 percent, about a third faster than the population will grow. Employment in manufacturing will increase 13 percent, a little faster than the total population will increase; and employment in services will increase 27 percent, 50 percent faster than total employment will grow and nearly three times faster than the population will grow.

Mideast

The Mideast Region consists of the District of Columbia and five states: New York, New Jersey, Pennsylvania, Delaware and Maryland. Forty-five and one-half million people live in the region after the region posted the smallest percentage gained in population among the eight regions since 1970.

Over the next decade the population will increase 7 percent, a gain of 2.9 million people. Only the Great Lakes Region will grow more slowly than the Mideast Region. The age 0 - 19 and age 64 and older groups will increase slightly faster, 8 and 9 percent, respectively. The age 20 - 64 group will increase only 5 percent. Total employment over the next decade will increase twice as much as the population (14 percent).

Unemployment in the Mideast Region will begin to increase dramatically, which may pose serious labor shortage problems. In 1970 one of every five workers in the Mideast worked in manufacturing. Currently, only 15 percent of the region's jobs are in manufacturing, and by the year 2000 employment in manufacturing will fall to 14 percent of the region's total. Jobs in manufacturing will remain steady at 3.6 million through the year 2000, whereafter manufacturing jobs will begin to decline slightly. Nonetheless, the total number of jobs in the region will increase by 14 percent from 23 to 27 million due to huge increases in the services sector. The Mideast will lead all regions of the country in service-job growth with an increase of 30 percent by the year 2000. Two of every three new jobs gained in the region over the next decade will be in the service sector.

Both the population and the employment mix in the Mideast Region is diverse. Despite a slow growing population, business opportunities will be plentiful as the region adjusts to new economics.

Southeast

The Southeast Region is the largest of the eight regions and consists of 12 states: Alabama, Arkansas, Florida, Georgia, Kentucky, Louisiana, Mississippi, North Carolina, South Carolina, Tennessee, Virginia and West Virginia. Fifty-nine million people live in the diverse region and the Southeast will increase by 17 percent, another 10 million people by the year 2000. People aged 65 and older will increase faster than other age groups. By the year 2000, the older population will grow from 7.7 to 9.4 million people, an increase of 22 percent. The number of people aged 20 to 64 will increase by 16 percent, which will account for 54 percent of the growth in the region. The number of people less than 20 years old will increase by 17 percent. Of the eight regions, the Southeast is the fourth fastest growing.

Total employment will grow 19 percent, more than the total population. Employment in manufacturing will grow 20 percent and employment in services will grow 22 percent. The Southeast employs nearly 5 million workers in manufacturing. The region will add another million manufacturing jobs and employment in manufacturing will remain relatively stable at 17 percent of total employment through the year 2000. One of four new jobs in the area will occur in service industries, which will account for 1.4 million new jobs. Growth in the service sector will remain stable. Services will represent 22 percent of all jobs in the year 2000.

Great Lakes

The Great Lakes Region consists of five states: Ohio, Indiana, Illinois, Michigan and Wisconsin. Total population of the region is 42 million following a loss of 1.7 million residents since 1980. The region will regain 1.7 million people by the year 2000. That would represent a 14 percent increase in population but a rate of growth hardly a third as fast as the nation at large. Most of that growth (10 percent) will come from the age 65 and older group. The age 0 - 19 group will grow 5 percent and the age 20 - 64 group will grow only 3 percent. The Great Lakes Region is the slowest growing of the eight regions.

More than 800,000 jobs in manufacturing, or 16 percent of the region's factory work force, were lost since 1970. The number of jobs will increase slower than the national average through the year 2000; nonetheless, a 7 percent increase or one and a half million jobs will open. Manufacturing will lose another 200,000 jobs in the Great Lakes Region by the year 2000, but the service sector will gain 1 million new jobs. During the 1970s and 1980s, the region gained 2.6 service jobs for every manufacturing job lost. The trend of losing manufacturing jobs but gaining service jobs will continue. Total employment will increase 7 percent. Growth will be in services overwhelmingly (20 percent). Growth in manufacturing will decline about 5 percent over the next decade.

Although employment in manufacturing is on the decline, one in five workers continues to have a factory job and, by the year 2000, manufacturing will still employ 19 percent of all workers. Because of the continued relatively large share of employment in manufacturing, the economic health of the Great Lakes Region will continue to depend on productivity from the manufacturing sector. Dependence on heavy industry will lessen in the future, and the region will employ more people in the services. This should diversify and stabilize the economy.

Plains

The Plains Region consists of seven states: Iowa, Kansas, Minnesota, Nebraska, North Dakota, and South Dakota. This is the region that has born the brunt of the farm crisis. The Plains are home for 18 million people. The area will gain about 1.6 million residents or 9 percent over the next decade. That will be a rate only four-fifths as fast as the national annual average.

Over the next decade the total population will increase 9 percent. The percent of the working-age population, those aged 20 to 64, will increase by 7 percent from 10.2 million to 10.9 million by the year 2000, which will represent an addition of three-quarters of a million people to this age group. Over the same period the number of elderly will increase by 20 percent. Those under age 20 will increase by only 8 percent.

The Plains states are trying to diversify and to lessen their dependency on agriculture. Employment in manufacturing in the Plains Region will rise from 1.4 million to 1.6 million by the year 2000, an increase of 14 percent. Jobs in the service sector of the Plains, however, will increase both numerically and as a share of total employment. Nearly a half million jobs will be added, from 2.4 million to 2.8 million, a 17 percent increase. This will represent an increase from 24 percent to 26 percent of all jobs in the Plains region.

Rocky Mountains

The Rocky Mountain region consists of five states: Colorado, Idaho, Montana, Utah and Wyoming. It is the youngest of the eight regions with one of three residents under age 20.

The Rocky Mountains region's population consists of 7.7 million people. That population will grow by 1.5 million people, about a third faster than the nation at large. The population will grow 20 percent from 1988 to the year 2000. If the Rocky Mountain region's manufacturing sector grows as anticipated and compensates for the region's slower growing energy industries, the entire region could benefit from the more diversified economy. The 2.5 million people who are currently less than 20 years old will increase to 2.9 million by the year 2000, a 16 percent increase; but the region's older age groups are growing faster. The number of people aged 20 to 64 will increase by 21 percent, and those 65 years old and older will grow the fastest of all, up 43 percent.

The Rocky Mountain region has the smallest labor force of the eight regions of the country with 4 million workers. The number of workers will increase to 4.9 million by the year 2000, which would represent a 23 percent increase. However, because the number of workers is small, the number of new jobs will be less than the number created in other regions.

Of the eight regions of the country, the Rocky Mountain Region is the only one in which the proportion of workers employed in manufacturing is likely to increase, from 10 to 12 percent by the year 2000. The number of jobs in manufacturing will increase by 50 percent compared with a 22 percent increase in jobs in service-producing industries. Thus, total employment will rise about 900,000 with nearly 200,000 new jobs in both manufacturing and services, and about a half million in all other areas of employment. Total employment will grow 23 percent.

Southwest

The Southwest Region consists of four states: Arizona, New Mexico, Oklahoma and Texas. This region grew faster in population than any other region from 1970 to 1984, but by the year 2000 it will slip to second place behind the Far West in rate of growth.

The Southwest will grow from 25 million to 30 million people in the year 2000, an increase of 20 percent. The working-age population, those aged 20 to 64, and those less than 20 years old will grow by 18 percent, which will nearly equal the growth rate of the region. The number of people aged 65 and older will increase by 29 percent, much faster than the regional average.

Although the national trend over the next two decades will be a decline in the percent of workers who hold jobs in manufacturing, employment in manufacturing in the Southwest will be stable at 12 percent of the work force through the year 2000. From 1970 to 1988 the Southwest gained more than a half million jobs in manufacturing, and the region will gain nearly another half million factory jobs by the year 2000. Twenty-two percent of employment is currently in services and that share of the work force will remain stable as the number of people employed in services grows from 2.9 million to 3.5 million by the year 2000. Thus, for each new job in manufacturing, there will be one and one-half new jobs in the services sector. Total employment will increase 23 percent, 27 percent in manufacturing and 21 percent in services. Expanded employment opportunities in services should help Texas and Oklahoma, the two major energy production states in the region, make the transition away from petroleum dependency to a more diversified economy.

Far West

The Far West Region consists of six states: Alaska, California, Hawaii, Nevada, Oregon and Washington. The region will grow faster than any other region in the country. The Far West will account for 27 percent of the nation's total population growth by the year 2000. The Far West is already home to 38 million people. It will grow to 47 million by the year 2000, a gain of 23 percent or 9 million new residents.

The fastest growing age group in the Far West will be those aged 65 and older, which will increase 31 percent over the next decade. Over the same period those aged 20 to 64 will increase 22 percent, and the number of people under age 20 will increase by 23 percent, from 11 to 14 million.

Total employment will increase 23 percent. Whereas the nation will experience a 13 percent gain in manufacturing jobs, the Far West will experience a 17 percent increase, nearly a third more than the national average. Most of the 700,000 new jobs in manufacturing will be in small shops and factories, which has been the source of most growth in recent manufacturing nationwide. Service jobs, which constitute the fastest growing employment opportunities, will increase even more spectacularly in the Far West–29 percent or 1.6 million by the year 2000. For every five new service jobs gained in the nation, one will be in the Far West. Of the eight regions of the country, only the Mideast will gain more new service-sector workers by the year 2000.

Given the opportunity for employment in small shops and factories, the Far West will be the land of opportunity for the next generation of entrepreneurs.

New Information

Employment projections are like fruits and vegetables. They are perishable. They spoil when they get old. The information on employment projections in this chapter is fresh now, when it is written, but it will soon get old. Nobody wants food poisoning from spoiled produce, and nobody wants "career poisoning" from spoiled information. In the next chapter I show you how to stay up-to-date.

Six

Where to Find Occupational Information

Choosing a career can be like shopping for granddad's necktie. The tie rack offers hundreds of possibilities, and at first glance none may be very appealing. The sooner you can categorize them–sort them into silks and woolens, paisleys, stripes and plains, too expensive and too cheap–the quicker you can eliminate most of them and concentrate on the real possibilities.

Sorting career possibilities is much more complicated than buying a necktie for grandpa, yet the sorting process is much the same. A good way to begin is to rule out the ones that would never work, and pick the ones that at first glance might be possibilities, knowing that you will eventually discard all but one or two. Similarly, when it comes to choosing a career, the first task is to identify the possibilities from which to choose. Build a list. Rule out the groupings of industries and occupations that just don't fit. Don't let the misfits clutter up your son's or daughter's thinking.

Whether buying neckties or choosing a career, the time comes when a person has to narrow the options. A person must look more carefully at how the colors and patterns and material will blend with granddad's favorite shirts and 20-year-old suit coats. It's no longer enough to sort into browns and blues, or industries and occupations. It helps to have more detailed information about employment projections, entry requirements, pay, and how these vary by regions of the country.

One of the reoccurring themes that came through in our study of young adults was their lack of information. A health technologist for the state board of health in Mississippi told us: "Let them know early what types of jobs are available, their requirements and future demand and projected level of earnings, be they college education type or simply technical."

In this chapter I explain where to get and how to use information to sort out career options and maybe add some new career possibilities. I describe an excellent source of information on occupations and how to use it. I explain where to go for more detailed state information and for information for people with special needs–the blind, handicapped, women and minorities. The chapter closes with suggestions for what parents can do which includes a simple, four-step model parents and young people can use to help them make decisions. Part 2 of the book ends with the second section of the Career Explorations Workbook.

The *Occupational Outlook Handbook*

The *Occupational Outlook Handbook* (*OOH*) is the bible of occupational information. It is the best–the most comprehensive, the most accurate, and the most up-to-date–single source of nationwide information on occupations and career possibilities. In addition to being the most authoritative, The *OOH* has these features to recommend it:

> It is the most common single career information source. More than 90 percent of schools nationwide have one or more copies.
>
> It is the most frequently chosen single resource by students.
>
> It, together with computerized systems, is identified by students as the most valuable resource overall.

Parents and young people who are serious about making informed career choices will want to be familiar with the *OOH*. It's a superb reference. It may not be as eye-appealing as some of the more popular resources, but the information is all there. It's the best place to start.

The Department of Labor publishes a new edition of the *Handbook* every two years. It is almost the size of a Sears Roebuck catalog, 400 - 500 pages long, and you use it like a mail-order catalog. Start with the table of contents in the front or the index in the back, find the occupation that interests you, then turn to the appropriate pages and read about it. Of course, it's also a good book to just thumb through. The *OOH* is a reference volume, not the kind of book you will curl up with by the fireplace and read from cover to cover, but it is the best answer to the problem many young adults cited in our study, like this telephone company worker's daughter with a degree in sociology: "I guess as far as jobs and careers go, I had a very limited knowledge of the labor market, what jobs are available, types of work, and who employs these people."

Use of the Occupational Outlook Handbook

The current edition of the *Occupational Outlook Handbook* (1988-89) provides detailed information on about 225 occupations and summary information on about 125 more occupations. The occupations are grouped into broad occupational groupings that largely follow the Standard Occupational Classification system (SOC), which is the classification system I introduced you to earlier.

There are two ways for you and your son or daughter to use the *Handbook*. If you have some idea of his or her interests, you can begin with the table of contents which lists nearly twenty groups of related occupations plus job opportunities in the Armed Forces. These subdivide into numerous categories, which in turn list specific occupations. For example, one cluster of related occupations is "Engineers, Surveyors, and Architects." Within that cluster there is a separate grouping for "Engineers"; and within "Engineers" there are ten different kinds of engineers. If your son or daughter is interested in something having to do with engineering, the table of contents offers several engineering specialties you can check out.

The Occupational Outlook Handbook is the best single source of nationwide information on occupations and career possibilities.

A second way to use the *Handbook* is to start with the alphabetical index to occupations in the back of the book. Here the approach is to seek out specific occupational titles and pursue those that interest you. There are several routes you can follow. You can turn directly to the information on a general heading–for example, engineers. Under "engineers" the index adds several subcategories under "see also" and then alphabetically lists the ten specific kinds of engineers. No matter how or where you start, the *Handbook* provides information on occupations and refers you to related occupational titles.

Occupational Information

Whether you get into the *Occupational Outlook Handbook* through the table of contents at the front of the book or the index at the rear, the *Handbook* gives a wealth of information on occupations. It tells what each occupation is like; education and training requirements; advancement possibilities, earnings, and employment outlook; related occupations to explore; and where to get more information.

Each section of the *OOH* follows a set pattern that makes it easy to compare one occupation with another. The information for specific occupations is then summarized in about two pages. It follows this format.

Nature of the Work. This section describes the main duties for people employed in an occupation. It tells what workers do on the job, how they do their work, and what tools or equipment they use. The work description is general and typical of the many jobs in the larger occupational classification. Nonetheless, in many occupations the work varies from one job to the next, and the *OOH* discusses this variation.

The section on registered nurses is an example. It includes short paragraphs about hospital nurses, nursing home nurses, community health nurses, private duty nurses, office nurses, and occupational health or industrial nurses. The descriptions explain how the type of work varies from one employment setting to the next.

Working Conditions. A high school graduate with military training as a heavy-equipment mechanic now works as a machine operator for a petroleum refining company in the Northwest. His advice on how to help young people prepare for careers was brief and to the point: "Help prepare them for what is really going on in the world today and how ruff (sic) it is to make it with or without an education."

Working conditions are an important consideration when thinking about a career. Some people like the great outdoors and would feel all cooped up in an office job. Others find bad weather, dust, noise, and dirt distasteful. They prefer air-conditioned offices. Working conditions may vary in several respects. For example, evening or night work may be required on a permanent, rotating, or shift basis. There may be requirements for on-demand overtime work. Working conditions may include environmental considerations and health and safety factors.

Another example: in the case of electricians the *OOH* notes that electricians may stand for long periods of time. In addition, they frequently work on ladders and scaffolds, as well as in awkward or cramped positions. Electricians risk injury from electrical shocks, falls, and cuts; to avoid injuries they must follow strict safety procedures.

Work settings vary. Knowing the normal conditions under which a young person would work is an important consideration in choosing a career. Neither we nor our sons and daughters will know their exact working conditions in advance. But it helps to know the general conditions and these may be different than we've seen on TV.

Employment. This section reports the number of workers in the occupation and tells whether they are located primarily in certain industries or geographical areas of the country. For example, in 1986 about 263,000 people worked as computer operators and most were employed by data processing service firms, colleges and universities, and hospitals. If regions of the country and size of residential areas are a consideration, the *Handbook* discusses these. And though an occupation may be expanding, how soon it will grow is an important consideration too.

The size of an occupational group and the number of people in an occupation who work in particular settings are important considerations to people looking for employment because large occupations, even if growing slowly, offer many openings when workers retire or die. Similarly, information on full- and part-time employment may be an important consideration for students, homemakers, or retired persons and others who want to work part-time.

Training, Other Qualifications, and Advancement. An insurance underwriter with a master's degree in economics said: "It would have been helpful to have had more awareness as a high school student as to what was available as a career and how to best prepare for it." Career preparation decisions are an increasingly important part of the career choice process.

Not all occupations are open to everyone. Some require that applicants have certificates or advanced degrees that involve considerable investments of time, ability, and finances. Other occupations list preferences for candidates with high school or college course work in particular areas.

There are various ways to prepare for employment:

College study leading to a certificate or degree

Programs offered by public or private postsecondary vocational schools

Home study courses

Government training programs

Experience or training obtained in the armed forces

Apprenticeship and other formal training offered by employers

High school courses

The *Handbook* indicates the preferred preparation for each occupation. If employers accept alternative programs, the *Handbook* lists these too.

The section on training, other qualifications, and advancement specifies common forms of certification and licensure required to enter an occupation. However, states vary regarding certification and licensure requirements for certain occupations, and parents and young people should always supplement *Handbook* information with information from the appropriate state agency. This section in the *Handbook* also lists other qualifications, including personal characteristics, that are generally needed or desired of workers in the occupation.

The *Handbook* indicates that some occupations are natural steppingstones to others. If a pattern of movement from one occupation to another exists, the *Handbook* discusses it. For example, experienced dietitians may advance to assistant or associate director, or to director of a dietetic department. With graduate training they may advance to teaching, research, or administration.

Information on career possibilities is useful. Skills gained working at one job may enhance a person's "working capital," making him or her employable for another position, perhaps a more desirable job. Sometimes moving from one occupation to another requires more than the training or experience acquired on the job. The *Handbook* outlines the possibilities for advancement with additional training and indicates in-service programs available by which employees may enhance their skills.

Job Outlook. A person's interests, abilities, and career goals are important considerations in selecting a career, but whether the job market is favorable is also an important consideration for young people in determining whether to pursue a specific career. What can be done to help young people prepare for careers? A flight attendant with a college major in fine arts said: "Being realistic with individuals, letting kids know what areas of the market are glutted (i.e., teachers)." The job outlook section outlines the employment prospects for each occupation.

The information includes a statement of the expected change in employment in the occupation and whether the job opportunities are likely to be favorable or unfavorable. In some cases the *Handbook* provides information on the supply of workers. It also indicates how soon employment prospects are likely to develop. In some cases the *Handbook* comments on the effect fluctuations in economic activity are likely to have on employment in the occupation. In most cases the *OOH* gives the expected change in employment through the year 2000.

The *Handbook* has adopted a standard rhetoric for describing projected changes in employment by the year 2000. Following are key statements and their meaning in terms of employment projections:

Statement	Projection
"Much faster than average"	35% or more increase
"Faster than average"	25% - 34% increase
"About as fast as average"	14% - 24% increase
"More slowly than average"	5% - 13% increase
"Little change"	4% or less increase or decrease
"Decline"	5% or more decrease

So, also, the *Handbook* has a standard way of describing job opportunities and competition:

Statement	Ratio of Job Openings to Job Seekers
"Excellent opportunities"	Much more numerous
"Very good opportunities"	More numerous
"Good or favorable opportunities"	About the same
"May face competition"	Fewer
"May face keen competition"	Much fewer

While useful, information on expected changes in employment should be used carefully. No one can predict labor market conditions perfectly, the number of job openings and job seekers changes constantly, and employment prospects in a particular state or locality may differ from the national outlook described in the *Handbook*.

Areas of slow growth, strong competition for available positions, and few openings should cause young people to pause, but this information alone should not prevent them from pursuing careers that really interest them. Even occupations that are small or overcrowded offer jobs that are vacated when people retire or die, and there is always a need to replace those who leave the occupation. If the occupation is large, the number of job openings that occur from replacement needs is generally much larger than the number that occurs in small occupations, even those with high growth rates. But replacements are needed even in small occupations. Parents and young people should not rule out a potentially rewarding career simply because the employment outlook for that occupation is not favorable.

Earnings. The earnings level for a prospective occupation is another important consideration.

People tend to think of earnings in terms of money–a check deposited in the bank or cash in the pocket. But money is not the only financial reward for work. Fringe benefits take many forms: social security, workers' compensation, unemployment insurance, paid vacations, holidays, sick leave, life, health, and accident insurance, participation in retirement plans, and supplemental-employment benefits, and these too must be considered. All are provided in part or total by employers.

Parents and young people should not rule out a potentially rewarding career simply because the employment outlook for that occupation is not favorable.

Other forms of salary supplementation may occur from working overtime, night shifts, irregular hours, tips, commissions, and piece rates. Some occupations–for example, plumbers and electricians–offer workers a chance to supplement their wage or salary income with jobs on the side. Some employers offer stock options and profit-sharing plans, saving plans, and bonuses.

Workers may receive part of their earnings in the form of goods and services. Sales workers in department stores may receive employee discounts on purchases. Private household workers may receive free meals or free housing. Workers in other jobs may receive uniforms, business expense accounts, use of company cars, or free transportation on company-owned planes.

It is not easy to determine which occupations provide the highest earnings because good information is available only for wages and salaries. In some cases, not even that is not available. Further, pay levels may depend on the worker's experience, seniority, or qualifications. Earnings may vary by geographic location, or by industry, or by the specialty or type of work performed within occupations. Because of these variations, parents and young people must exercise caution in interpreting earnings information.

The *Handbook* reports earnings. Generally, the figures are for workers in private industry who are not in supervisory positions or engaged in farming. Also, reported earnings are based on information that is normally two to three years old. Pay levels differ between occupations and within occupations. Because of these variations it is always wise to check with local employers about earnings for a particular occupation.

Related Occupations. This short section lists occupations that require similar worker aptitudes, interests, education, and training. These occupations may be viable alternatives to a young person's primary interests, and it is useful to read about them. It gives the bigger picture. One of the young ladies in our study criticized high schools and colleges saying: "The practical, realistic approach to life was sadly missing." What did she say could be done to help young people prepare for the future? "Better programs exploring a much wider range of career opportunities. Many people fall between auto mechanics and attorneys," she said. "A much wider approach is vital." The related occupations section in the *Handbook* gives that wider approach.

Sources of Additional Information. This section appears at the end of every Handbook description. It identifies government agencies, professional societies, trade associations, unions, corporations, and educational institutions that make available additional career information. Much of the information is free of charge.

The *Occupational Outlook Handbook* is a good source of information on the entire country, but it is only one source of information. Parents and young people should supplement that information by contacting organizations that give additional information on particular careers.

Other OOH Information

The *OOH* presents a set format of information on approximately 225 occupations that account for about 80 percent of all jobs in the economy. In an appendix the *OOH* presents summary information on another 125 occupations, which account for another 10 percent of all jobs. Each description includes a brief description of the nature of the work, the number of jobs, and a phrase describing the projected employment change. Thus, the *OOH* covers all but about 10 percent of jobs in the economy.

Also, the *OOH* presents a short section on job opportunities in the armed forces. This section follows the same basic format as the *Handbook* follows in presenting the major occupations. In addition, it covers such topics as the distribution of military personnel across the services and the distribution of enlisted personnel by broad occupational categories.

State Information

A college graduate who now works as a sales manager for a department store on the West Coast speaks for many young people when we asked him what were the major problems he encountered since leaving high school. "The major problem was I had no clear idea of what I wanted to do and what most occupations involve," he said. Fortunately, there is good information available on what occupations involve, and it is becoming more and more accessible through Occupational Information Systems (OIS) and Career Information Delivery Systems (CIDS).

Occupational Information Systems (OIS)

Since 1977 there has been a sustained effort to establish an agency in each state with responsibility for gathering and disseminating state career information. The agencies are called State Occupational Information Coordinating Committees (SOICCs). Each has a staff that assembles and distributes occupational information on request. The SOICCs also deliver national and local information to users. In many cases the information extends beyond occupational planning to include educational planning and life planning.

The various SOICCs are coordinated by the National Occupational Information Coordinating Committee (NOICC), a Federal interagency committee established by Congress in 1976 with offices in Washington D. C.. Its primary mission is to promote the development and use of labor market information–i.e., information about education, jobs, occupations and careers. This mission is accomplished through the SOICCs.

Since 1977 there has been a sustained effort to establish an agency in each state with responsibility for gathering and disseminating state career information.

NOICC and the SOICCs do not gather occupational and labor market data, but the NOICC/SOICC network has responsibility for promoting and facilitating the use of data collected by numerous Federal and state agencies including state employment security agencies, state vocational education and rehabilitation agencies, Job Training Partnerships Act programs, the Bureau of Labor Statistics, the Employment and Training Administration, the Center for Education Statistics, the Department of Defense, and others.

Career Information Delivery Systems (CIDS)

In 1977 Congress expanded the NOICC/SOICC role by involving the network directly in helping meet the labor market information needs of young people and adults who make career decisions. At that point the NOICC/SOICC network became involved in the development of Career Information Delivery Systems (CIDS). CIDS are computer-based systems that give individuals current, accurate, national, state and locally relevant occupational and educational information.

CIDS typically contain descriptions of 250 or more occupations. The systems describe duties associated with the occupations, working conditions, worker requirements and the employment outlook. They describe occupational wages and salaries, information on major employers in the state and job openings posted with the state employment security agency. The CIDS also provide information on postsecondary institutions that offer career preparation in the form of education and training programs, details about the programs offered, admissions requirements, financial aid, and the like. Most CIDS now also include military occupational and training information.

Other Services. In addition to computer-based CIDS systems, states use a variety of other methods to deliver career information. For example, SOICCs publish such materials as career information newspapers and newsletters and directories of licensed occupations and apprenticeship programs. SOICCS sponsor career days and job fairs. SOICCS operate telephone hot lines that provide information about jobs, occupations, and careers.

There are 46 state CIDS now in operation. CIDS are located in about 15,000 settings nationwide. You may be able to use your state CID services through local high schools, public libraries, job training centers, corrections facilities, vocational rehabilitation centers, continuing education centers, employment service offices, counseling agencies, welfare offices, private employers, and community organizations.

The CIDS accommodate about 7 million increasingly diverse users each year. During the 1970s the CIDS were used almost exclusively by high school students, probably because many of the early systems were put in place in high schools. By the early 1980s a fourth of CIDS users were nonsecondary school students; and more recently more than a third of the people who used CIDS systems were adults or college students.

The SOICCs provide the best information available on occupations for each state.

The *Occupational Outlook Handbook* provides the best occupational information available on a nationwide basis, and the SOICCs provide the best information available on occupations for each state. The name of the particular career information delivery system may differ from one state to another, but three points warrant emphasis:

> State occupational information is usually available through your State Occupational Information Coordinating Committees (SOICC).
>
> States have Career Information Delivery Systems (CIDS) that are designed to serve the information needs of state residents.
>
> Although the SOICCs and CIDS are relatively new, only about 15 years old, they provide the best labor market information available for your state and, possibly, for your locality within your state.

You are paying for these programs with your tax dollars. Use the services.

Note. States, like the federal government, have a habit of reorganizing themselves every now and then–about every time there is an election. When reorganization fever sets in, people change, agency names change, and organizational charts change. In other words, "SOICC" and "CID" may not be listed as such in your telephone directory. For example, the State of Michigan doesn't have a SOICC, but it has a MOICC–i.e., Michigan Occupational Information Coordinating Committee. Many states incorporate the state name in the name of the Committee.

How can parents and young adults track down their state Occupational Information Coordinating Committee and Career Information Delivery System? And where can they use it? Here are two foolproof ways to track the systems down–and you may have to track them down:

> Call your State Department of Labor and ask where you can get occupational information on your state.
>
> Write or call the director of your state system. The title, address, and telephone number of your State employment security agency director of research and SOICC directors is listed in Appendix C, pages 422 - 424, of the *Occupational Outlook Handbook* (1988-89 edition).

Other Sources of Information

Parents and young people have access to other sources of career information. Libraries, career centers, and guidance offices in schools are the most common resource centers. Typically, they have copies of the *Occupational Outlook Handbook* together with other reference books, brochures, magazines, and audiovisual materials on occupations, careers, self-assessment, and job hunting. Collections of occupational material are also available in public libraries, college libraries, learning resource centers, women's centers, and career counseling centers. Check with your librarian, also the telephone operator. They can help you get information.

Counselors play an important role in making career information available. You should use their knowledge and expertise. Counseling, also vocational testing, is available in a number of places:

> Guidance offices in high schools
>
> Placement offices in vocational schools
>
> Career planning and placement offices in colleges
>
> Job service offices affiliated with the U.S. employment service
>
> Vocational rehabilitation agencies
>
> Counseling services offered by community organizations
>
> Commercial firms and professional consultants

Most career guidance offices offer a variety of services, materials, and activities. Materials include films, filmstrips, cassettes, tapes, kits, interest and aptitude inventories, and computerized occupational information systems. Activities include individual advising, group discussions, guest speakers, field trips, and career days. It is useful to have some general career areas in mind when you and your son or daughter visit these centers, although counselors are able to help people in the early stages of career choice also. The important thing is to start the career search process using whatever resources are available. It's like climbing a ladder or stairway. Every step you take gives a clearer picture of what lies ahead. That's what you want.

If I had no idea where to start, I would begin by looking through the *Occupational Outlook Handbook*. It's available almost everywhere, including high school career centers and libraries. And don't overlook the staff at resource centers. They are there to help you and most are eager to do so.

A young man who studied psychology in college and now works for the family construction firm told us that "educated adults are the kids' best bet." One of the ways parents and other adults can help young people is by knowing where to go and where to start when searching for good career information.

Information for Special Groups

Certain groups including youth, handicapped persons, the blind, women, and minorities present special challenges in securing employment. These organizations provide career information for such groups.

Handicapped

The President's Committee on Employment of the Handicapped, 1111 20th St. NW., Room 636, Washington, DC 20036. Phone: (202) 653-5044.

Blind

The Job Opportunities for the Blind Program, a division of the National Federation for the Blind. Phone: 1-800-638-7518.

Women

U.S. Department of Labor, Women's Bureau, 200 Constitution Ave. NW., Washington, DC 20210. Phone: (202) 523-6652

Wider Opportunities for Women, 1325 G St. NW., Lower Level, Washington, DC 20005. Phone: (202) 638-3143.

Catalyst, 250 Park Ave. South, New York, NY 10003. Phone: (212) 777-8900.

Minorities

National Association for the Advancement of Colored People (NAACP), 4805 Mount Hope Dr., Baltimore, MD 21215-3297. Phone: (301) 358-8900.

League of United Latin American Citizens (LULAC), National Educational Service Centers Inc., 400 First St. NW., Suite 716, Washington, DC 20001. Phone: (202) 347-1652.

A Word of Caution

Career information should be checked carefully and it should be used cautiously.

It is always important to use the latest and best information available. Know the date and source of the information. Check it. Be careful about information on the employment outlook, earnings, and training requirements that is more than five years old. Career information, particularly information on employment projections, becomes outdated quickly. The Bureau of Labor Statistics develops new projections every two years, and information that is old may be obsolete and misleading.

It is also important to check the source of information. Although most material is produced to provide useful vocational guidance, some is produced for recruitment purposes. A word of caution is in order. Check the source. Beware of descriptions of employment possibilities that look too good, promise big bucks, exaggerate the demand for workers, or leave out important information. If in doubt, discuss the information with a counselor, teacher, or librarian.

Remember, outlooks and projections may be wrong. No one has a crystal ball or undistorted view of the future, and even the most careful estimates may be altered by national and international developments, technological innovations, federal priorities, climate, and the like. For these reasons anticipated growth rates can never be the only consideration when it comes to choosing a career. The size of the occupational groupings or industrial sectors together with state and regional variations are also important considerations.

Information is better than ignorance, and good information is better than bad information.

Projections may be frail, but I admit to a bias: information is better than ignorance, and good information is better than bad information. Parents can help young people choose careers by helping them locate occupational information and making sure it is good information.

What Parents Can Do

A major Educational Testing Service (ETS) study of career information systems is critical of students and counselors. The criticism of students is that they don't take advantage of the career information resources high schools make available. A major criticism of counselors is that many could not identify a single resource for up-to-date information on local wages and salaries, information about job security and tenure, jobs that involve helping others, and occupations that are accessible to the handicapped. It is not my purpose to throw stones at either students or counselors, but I emphasize two themes that appear throughout this book: young people need help choosing careers, and parents can help them.

In Part 2 I focused on the world of work, how it is changing, where it is going, and the importance of knowing what the key resources are that parents and young people can use in choosing a career. If you, a parent, have never been to your son's or daughter's high school career center, I urge you to go. You will be impressed by the amount and variety of career information materials that decorate the shelves and fill the filing cabinets. The amount of material is impressive. Unfortunately, too many students and counselors don't use the material.

Parents can help their sons and daughters choose careers, and the best place to start is with the *Occupational Outlook Handbook*. In fact, you may want to consider buying a copy, perhaps the paperback edition, and keeping it at home. It's the best information on occupations you can buy. Send for it from the Government Printing Office, Superintendent of Documents, Washington, DC 20402. You will have to pay in advance, so check the current cost before ordering. Phone: (202) 783-3238 for price and ordering information.

Let me suggest two other widely used references for occupational information. One is *The Encyclopedia of Careers and Vocational Guidance*, which is a commercial product. The *Encyclopedia* is well-written and illustrated. It is also fairly widely available. Many students and counselors find it helpful and easier reading than the *Occupational Outlook Handbook*. *Exploring Careers* is a good resource for middle school/junior high school students. It promotes career awareness through stories about people at work, photographs, evaluative questions, suggested activities, and career games. *Exploring Careers* is available from the Government Printing Office.

Information about the employment outlook for specific regions of the country is more difficult to locate. Be aware, however, that each year, about mid-October, the *New York Times* publishes a special Sunday supplement on careers that projects the effects of social, political, and economic change on the labor market. Often the *Times* supplement focuses on the impact of these changes for regions of the country. Watch for it. *The Christian Science Monitor* occasionally, but irregularly, also publishes articles on careers. And, of course, the popular news magazines–*Time*, *Newsweek*, *U.S. News and World Report*–sometimes feature the employment outlook and give attention to regions of the country.

Take advantage of national, state, and local information available through your State Occupational Information Coordinating Committee (SOICC) and Career Information Delivery Systems (CIDS). You can find out what career information is available in your state by checking with your school career center or job service office.

Parents can sensitize their sons and daughters to population changes and labor force trends in their own communities. School closings, sales of school buildings, and conversion of school buildings into office and apartment buildings are not uncommon. Why is this happening? And what happens to the people who worked in the schools, or in industrial plants that close, or in stores that close in your community? Where do the people go? What do they do?

In other parts of the country there is growth: new shopping centers, new residential area subdivisions. Where do the new home owners come from? Why did they move to this area? Why are new shopping centers being built? For whom? What economic factors make this happen? These are questions to raise with your sons and daughters. Maybe your family knows someone involved in the closing. How does it affect them? Local situations are excellent opportunities to discuss how population changes affect worker supply and demand. So also, new construction–suburbs, shopping centers, and plants–provide opportunities to talk about how the production of goods and services responds to demand, on the one hand, and how the delivery of goods and services requires a supply of workers, on the other hand.

There are other local topics that parents and young people can think about and discuss. What are the large companies in your area? In what industrial sectors do the companies operate? What is the projected growth for these industries? What are the predominant occupations in the companies and what is their projected growth? Parents can use down-home examples to help young people understand the difference between industrial sectors and major occupational groups, understand what industries and occupations are located in your community and state, and what the projections are for growth and employment in those industries and occupations.

Decision Making Steps

The problems young people have with choosing careers can be broken down into smaller components. Learning more about occupations, industries, and career preparation options are examples. There is another problem that a lot of young people have. They don't know who to make decisions–about anything!

I suggest that parents try to teach their children a four-step decision-making strategy. These are the four steps:

1. Identify interest
2. Get information
3. Evaluate information
4. Narrow choices

Young people will find that following these four steps will help them make decisions in a lot of different areas, not only in deciding about careers and career preparation possibilities.

Example. Suppose a young person wants to buy a car. Step 1 is to identify interests, and those might be something like this: need a four-wheel drive vehicle with lots of power and big wheels; must be rugged and "open;" can't cost more than $5,000; must be able to pull a boat; must be able to do routine maintenance myself.

Step 2 is to get information. Who makes such a vehicle? Certainly not Cadillac, but Jeep does. Additional information will reveal that Toyota, Suzuki, and some other manufacturers also produce such a vehicle. And the less than $5,000 price limit suggests that going to new car dealers will be a waste of time, so it probably makes sense to check the advertisements in the paper and to visit used car lots. This will probably produce six or eight vehicles that meet the requirements.

Step 3 is to evaluate the information. That includes checking how many miles are on the vehicles and probably concluding that the one with 45,000 miles is in better shape than the one with 89,000 miles; checking the tires and battery and condition of the body; possibly reading *Consumers Reports* about the repair records of each vehicle; road testing the vehicles to see whether each one holds the road, needs brakes, leaks oil, and whether the clutch slips; and determining whether the vehicle with 105,000 miles is worth $2,900.

The 4th step is to narrow the choices. That means rejecting the one with 105,000 miles–too many miles. It means ruling out the one that is really neat but sells for $7,400–can't afford it. It means ignoring the one with spongy brakes that also leaks transmission fluid–don't need those expenses. It means selecting those two or three from which a final decision will be made, and eventually choosing from them.

Mothers can use the same four steps to choose new carpeting for the den, and Dad's can use the four steps for buying a fishing boat. More important, young people can use the four-step procedure to sort out their career and career preparation options.

One way to help young people choose careers is to teach them a simple decision-making model.

When you can't figure out what to do, it makes sense to think about how you will decide. One way to help young people choose careers is to teach them a simple decision-making model.

Career Explorations Workbook

Knowing the best sources of information on population changes and labor force trends is one thing, but putting it to work is another. Part 2 of the Career Explorations Workbook which follows helps young people summarize and evaluate important information about the occupations that interest them.

Occupations may be much different to people who work at them than they appear to young people on the outside. That is one reason for young people to get additional information about occupations that interest them. Another reason to get more information is for young people to learn how they can prepare for occupations and to find out what the employment outlook is for the occupations that interest them. Still another reason is to get our sons and daughters using the resources that are available. Keep in mind that the goal isn't just to help them gain a sense of their career options; the goal is also to teach them how to make career decisions, a process they will have other opportunities to use over their work histories.

I suggest that parents and young people use the *Occupational Outlook Handbook* to answer the questions in Part 2 of the workbook. If the names of the occupations young people listed in Part 1 do not appear in the index to the *OOH*, parents may have to help their sons and daughters make the connections between the occupations that interest them and titles in the *OOH*.

Part 2 includes several evaluative questions. For example, after asking about the nature of work, a follow-up question asks young people: "How do you feel about these duties?" The evaluative questions are included for young people and their parents to discuss after completing Part 2.

Earnings information in the *OOH* is at least two years old. Moreover, wages and salaries listed are averages; and earnings information for your local area may be quite different. Keep this in mind.

Part 2 requires that young people prepare a worksheet, a separate sheet of paper for each occupation that interests them where they can summarize important information. Young people should write the name of the occupation at the top of the sheet, then write the number for each question as they work through the occupational information.

Now is the time to do Part 2 in the Career Explorations Workbook.

Part Two: Career Explorations Workbook

Occupational Information

"Occupational Information" helps you gather and evaluate information about the occupations you selected in Part 1. For each occupation, you will:

Read a short description of the occupation.

Summarize the key information on a separate sheet of paper.

Decide how you feel about the occupation.

Information Sources

Where can you get information about occupations? The best information is in the *Occupational Outlook Handbook*. The *Handbook* gives information on these characteristics:

Nature of the work

Working conditions

Employment

Training, other qualifications, and advancement

Job outlook

Earnings

Related occupations

Sources of additional information

Nearly every career center and library has the *Occupational Outlook Handbook*. Many have several copies. If you can't find a copy, check with your counselor or librarian.

Read the description in the *Occupational Outlook Handbook* for each occupation you listed in the Summary of Part 1.

The *Handbook* does not cover every occupation. Note, however, that in addition to the occupations covered in the *Handbook*, the *OOH* has a lengthy "Appendix A: Summary Data for Occupations Not Covered in the Handbook." The Appendix together with the main information section covers about 90 percent of all occupatioons in the economy. If the occupation you listed is not in the *Handbook* index, you may have to figure out what occupational title in the index includes the occupation that interests you. Check with your parents or counselor if you aren't sure.

Use a separate sheet of paper, a worksheet, to summarize your notes for each occupation. Write the name of the first occupation at the top of the first worksheet, and do the same for the second and third occupations on separate worksheets. As you go through the occupational information, write the number of the question and the key words in bold print on the worksheet.

Example: For number 4 below, write

4. Employment

Then, write the information in the space that follows.

1. TITLE OF OCCUPATION:

   What is the title of the occupation?

   Page number in the *Occupational Outlook Handbook*?

2. NATURE OF THE WORK:

   What are the main duties in this occupation?

   How do you feel about these duties?

3. WORKING CONDITIONS:

   What are the working conditions?

   How do you feel about these working conditions?

4. EMPLOYMENT:

   How many people work in this occupation?

   Where are most workers in this occupation employed? (Types of industries, regions of the country, size of community)?

   Do these places appeal to you?

5. TRAINING, OTHER QUALIFICATIONS, AND ADVANCEMENT:

   How do workers prepare for this occupation? (Important: Write down all that apply.)

   Four-year college (bachelor's or graduate degree)

   Two-year college or vocational/technical school (associate degree or certificate)

   Apprenticeship

   Military

   Industry training programs (on-the-job training or working as a helper to an experienced worker)

   Full-time job following high school

What high school or college courses are helpful?

Is certification or licensing necessary for entry into this occupation?

If "yes," what general qualifications (such as age and type of education) are necessary?

6. JOB OUTLOOK:

What is the size of this occupation?

Large (more than 250,000 workers)

Average (50,000 to 250,000 workers)

Small (fewer than 50,000 workers)

Expected growth rate in this occupation?

Higher than average?

About average?

Lower than average?

Considering the size and projected growth rate for this occupation, how would you classify the employment outlook? (Good? Average? Poor?)

If the employment outlook is less promising than you expected, how do you feel about preparing for this occupation? (Do you think that you should consider other occupations that have a better outlook? Still have a strong interest? Not sure?)

7. EARNINGS:

For what year?

What is the average wage for beginning workers? (per hour? per week? per year?)

What is the average wage for experienced workers? (per hour? per week? per year?)

How do you feel about the earnings outlook?

8. RELATED OCCUPATIONS:

What related occupations does the Handbook list?

Which of these interest you?

9. SOURCES OF ADDITIONAL INFORMATION:

Where can you write?

3

CAREER PREPARATION: EDUCATIONAL OPTIONS

Seven

College Degrees and Certificates

"You have to go to college to get a good job." Most people believed that in the past, and many still do. Education has been as much a part of the American value system as hot dogs, Chevrolet, and apple pie.

But as a parent, what do you want your son or daughter to learn? And why? Most likely you will be paying much of the cost. What do you want to buy? These are old, old questions, and people have answered them in different ways over the centuries:

> The purpose of education is to teach what is true and good and beautiful, to pass the classics to the next generation, whether that be Latin or Shakespearean prose. That's the answer seventeenth-century Erasmus and the twentieth-century Dewey gave.
>
> Forget about the classics, the world is a Tower of Babel–everybody babbling unintelligible sounds. The purpose of education is to train the mind, to teach how to think–logic, rationality, and how to organize knowledge–regardless of what people talk about. That was the Greek philosopher Aristotle's answer in the third century B.C.; and it enjoys much company with those concerned about the information explosion today.
>
> Get an education to get a job. The goal is vocational training, whether that be agriculture in the 1860s; chemistry, physics, law, engineering in the 1900s; or business and computer science in the 1990s. That purpose of education was equally at home with Plato in the third century B.C., the career education movement of the 1970s, and the 1990's college freshman.
>
> The purpose of education is neither to recite the classics, nor to learn to think like Aristotle, nor to get a good job. The purpose of education is personal liberation and the development of one's potentialities. Education as a personal quest was the rhetoric of the 1960s, but it has its advocates on today's campuses too, though you have to look for them.
>
> The goal of education is informed decision making that takes into account a moral and ethical component to life. This position extends beyond the historic claims of religious colleges to include today's Harvard President Bok's emphasis on applied ethics: "A university that refuses to take ethical dilemmas seriously violates its basic obligations to society."

To be sure, the purposes of education blur and blend. No college would say it serves but one purpose. All, particularly as we enter the 1990s, would claim to serve each purpose. Yet the particular mix of purposes varies from one college to the next and, in the case of large and comprehensive colleges, the emphasis will also vary within colleges. I concentrate on career preparation possibilities in this book, but I urge parents and their sons and daughters to recognize that their college options are broader than career preparation. To get a job is not the only reason to go to college, and it may not be the best reason.

No other country in the world has as many colleges to choose from, 3,340 at last count that grant degrees and about 10,000 that award certificates. That's one of the luxuries of living in a free society. But the variety of possibilities can confuse the career choice process. You have to decide what you want out of college and you have to know what colleges have to offer. An elementary school teacher who recently returned from teaching in Indonesia echoes this point and feels high schools need to do more to explain schooling options to young people: "It would be helpful if they [high schools] could tell them [young people] about the different types of schools, colleges, technical training schools, apprenticeship type programs, and the like. Also, it would be good if they would help the student make the initial contact with these schools or programs."

Colleges are society's largest talent sorting, career equipping, and job placement institution. Colleges come in many shapes, sizes, and kinds. Parents and young people need a way to sort through the possibilities.

In this chapter I try to help parents and young people work through the educational options that relate to careers. I discuss the difference between degrees and certificates, consider how colleges have changed since parents may have attended them some years ago, provide information on vocational preparation programs, and outline the kinds of colleges from which today's young people can choose.

Degrees and Certificates

The word "college" has become a catch-all category that loosely applies to a variety of educational and training programs, whether these offer degrees or certificates. What the education and training experiences have in common is they occur after high school. They are postsecondary programs, and they are offered by three kinds of postsecondary institutions: four-year colleges, two-year colleges, and technical schools (including business and trade schools). Postsecondary institutions offer education and training for students who have completed high school graduation requirements.

Degree programs are broad programs of study that teach knowledge that is generalizable to a variety of work settings. Certification programs emphasize learning and skill training for near-term employment in specific vocational areas.

There are many kinds of college programs. I sort them into two major groups, degree programs and certification programs, for purposes of thinking through the possibilities. As the labels suggest, degree programs lead to a degree, and certification programs lead to a certificate. Degree programs are broad programs of study that teach knowledge that is generalizable to a variety of work settings. Certification programs emphasize learning and skill training for near-term employment in specific vocational areas.

Differences and Similarities

Consider the difference. A degree program in physics offers the student a broad understanding of physical properties and processes, mechanics, and principles of energy transfer. The degree program includes the theory of physics so that the learner can use that general knowledge across a broad field of applications. By comparison, a certificate program in, say, transmission repair also deals with energy transfer but prepares a trainee for a specific line of work, fixing automobile transmissions. The certificate program emphasizes specialized knowledge, skill, and ability in a narrowly defined area. The focus is on how transmission parts work together rather than on the theory of energy transfer.

Degree programs are standardized across institutions so that students may transfer credits from one institution to another. Also, degree programs are cumulative. Lower-level degrees are the basis for continuing study toward advanced degrees. By comparison, certificate programs are shorter term and closed ended. They are not designed to provide the groundwork for advanced study, and a program at one institution is not necessarily compatible with programs offered elsewhere. A certificate program may be offered at only a single institution. Once certification is achieved, the program is over. The goal of certification programs is to prepare people for narrow specialties, and there are many areas in which a person can prepare for certification.

In some cases a degree and certificate may mean much the same. For example, an associate degree may indicate that a person completed a two-year vocational program that is skill oriented. The program includes related general courses and, therefore, qualifies the student for an associate degree. Alternatively, a certificate might be awarded after two years. It indicates that the person is trained in a narrow area and that the program of study has been completed. In either case, the student has completed a terminal vocational preparation program, and the holder of the degree or certificate is ready to go to work.

Levels of Degrees

Basically there are four levels of degrees. In ascending order of accomplishment they are: associate degree, bachelor's degree, master's degree, doctorate or other professional degree.

The most general four-year degree is the B.A. (Bachelor of Arts). The B.A. is required or accepted as general preparation for professional programs that lead to master's and doctoral degrees. Other kinds of bachelor's degrees indicate more specialized academic preparation. The B.S. (Bachelor of Science) degree indicates completion of a four-year academic program that is more focused and specialized than a B.A. program, but it is of longer duration and less specific than a certificate program. B.S. degrees are awarded for preparation for a career in such areas as science, business, engineering, agriculture, and education. The B.D. (Bachelor of Divinity) degree is another example. It indicates pre-professional preparation in theology.

A basic question young people have to answer if they want to go to college is whether they are interested in a degree or a certificate program. Both offer career-oriented programs, and the quality of one may not be better than the other. Yet there are differences, and the differences are important. Though both degree and certificate programs may claim to prepare a person for an occupation, the actual entry requirements to an occupation may specify one or the other, often a degree. For example, a person can take computer programming in many kinds of colleges today, and the course may lead to a certificate after as few as six weeks or to a degree in computer science after four years. But many employers require a degree for entry-level computer programmer positions. If both degrees and certificates are accepted for entry-level positions, employers often look more favorably on degrees than on certificates.

This is true for both employment selection and later advancement or promotion.

The abundance of degree and certificate programs and the necessity to choose between them is one of the big differences between colleges today and colleges back when you and I may have attended. "Don't go to college without some clear idea of an occupation or occupational area you want to practice, otherwise it is not worth the money." That's what a variety-store department head in Oregon told us, a young man with a bachelor's degree in math. Before considering the kinds of colleges from which today's young people may choose, I review other ways colleges have changed over the years and describe today's vocational preparation programs.

College Then and Now

"Things have changed." That's true of colleges, too. At the turn of the century only 6 percent of the population graduated from high school and only 4 percent enrolled in college. In 1986, 75 percent of the total population had graduated from high school and 19 percent had completed four years or more of college. Of the 25 - 29 year old age group, 86 percent had graduated from high school and 22 percent had graduated from college.

Growth

Since World War II the percentage of people who complete four years of college has moved upward steadily. During the 1960s alone, society dedicated over seven hundred new collegiate institutions–a new college every five days for a decade! Undergraduate enrollments doubled. In 1986, 12.4 million Americans enrolled in colleges and nearly 2 million more enrolled in noncollegiate schools.

Why the tremendous growth? You guessed it: The baby boom grew up and that was a big part of it. Also, the economy of the 1960s generated a strong demand for college graduates in managerial and professional jobs. That made a difference too.

But since 1970, the demand for college graduates in managerial and professional jobs slackened, revenues softened, and enrollments slowed down. That doesn't mean that college enrollments have declined. They haven't.

Government Involvement. Two-year colleges gained the lion's share of expanding enrollments. In the early 1960s only 14 percent of college enrollments were in community colleges. In 1985, 37 percent, more than a third of all college students, attended community colleges. The proportion of college students enrolled in four-year colleges declined from 74 percent to 63 percent from 1970 to 1985.

A long-term trend toward more public funding for higher education accompanied growth in the number of colleges. Over the past forty years the amount of public funds going to public colleges rose from 42 percent to 75 percent of total college revenues, not counting increases in student aid. Student aid programs grew even more dramatically. Federal spending for student aid was $40.3 million in 1958 when the first major federal program of general aid for college students was enacted. Today, annual federal spending for student aid is more than $15 billion.

Strings are attached to increased government support. State and federal agencies administering government funds have had an increasingly strong hand in college administration and have steadily eroded the policymaking role of trustees, faculties, and administrators. Today more than ever before, higher education is big business and it is a regulated industry. Government involvement has had three effects on the nation's colleges:

More growth in public than private schools

More public support for higher education and training

More governmental regulation of postsecondary education and training

The number of colleges has grown. The number of enrollments has grown. The size of institutions of higher education has also grown. In 1955 only one out of four students enrolled on a campus with a student body numbering over ten thousand. Today half enroll on campuses this size. In 1955, 8 percent of all students enrolled on campuses with fewer than five hundred students. Today, 1 percent enroll on campuses this small. With their higher tuition and more limited curriculum and social life, the small private college has been losing ground steadily to large public colleges and universities.

Student Body Composition

The makeup of college student bodies has also changed. During the 1960s, the civil rights and feminist movements stirred the nation's conscience on whether college education should any longer be the restricted privilege of young white males from well-to-do families. Large numbers of previously excluded groups enrolled, particularly minorities and females.

Minorities and Females. During the 1970s the number of black students in higher education more than doubled to nearly one and a quarter million. In fall of 1986, more than 9 percent of college enrollments were Blacks. Students of Mexican and Spanish origin also enrolled in greater numbers. Minorities comprise about 17 percent of college enrollments. Hispanics comprise over 4 percent and Asian Americans comprise about 3 percent of the total college enrollment.

During the 1970s the number of women enrolled in higher education rose from three million to nearly five million. In fall of 1986, 53 percent of college enrollees were females. Over one five-year period, 1974 to 1979, enrollments of women over thirty-five years old increased by 67 percent.

The turning point occurred in 1979 when more females than males enrolled in U.S. colleges. In 1972 the college enrollment ratio of males and females was 74 women to 100 men, but in 1986 there were 100 women for every 89 men on campus. While enrollment increased 12 percent for men, it increased 69 percent for women. Today, women in the thirty-five-and-over age group outnumber men of the same age by two to one on college campuses.

Today, half of full-time undergraduates are women, half of graduate students are women, the majority of part-time students are women, and the majority of students in two-year colleges are women. Also, more than half of students enrolled in noncollegiate institutions (business, trade, and technical schools) are women; more than half of all courses taken by students seventeen years old and older are taken by women; and, finally, the percentage of degrees awarded to women increased from 24 percent in 1950 to 49 percent in 1985.

Age and Part-Time Students. The age of students also changed during the 1970s, particularly for females. In one four-year period, 1972 to 1976, the proportion of college students over twenty-five years old increased from one out of four to one out of three. By 1981 most college students were over twenty-one years old. By 1986 more than a third were twenty-five years old and older.

Today's college accommodates the part-time student, especially the older part-time student. From 1970 to 1985, the proportion of full-time students declined from 68 to 58 percent. In 1985 twenty percent of students less than twenty-five years old were part-time students as were seventy-two percent of students twenty-five years old and older. Today, colleges are flexible and offer split schedules, off-campus learning sites, and evening classes. A generation ago dropping out to work or travel was highly discouraged. Today's patterns of college attendance are much more flexible, and "stopping out" is common practice.

Student Interests. Student bodies changed in other ways over the past two decades. Average academic ability, as measured by math SAT scores, was 17 points lower in 1986 than it was in 1967 and verbal SAT scores were 35 points lower over the same period. In one five-year period, 1975 - 1980, the number of remedial mathematics courses offered by public four-year colleges increased by 72 percent. In 1985, 88 percent of all 4-year colleges and universities and 95 percent of all 2-year colleges offered remedial education programs.

The career education movement of the 1970s introduced a significant change in college life. Career education placed strong emphasis on marketable skills, and many liberal arts colleges responded by changing into comprehensive institutions offering business, engineering, nursing, health-related programs, and the like. Student interests changed from political activism to more traditional concerns for jobs and careers. An ex-marine who works for a telephone company in Seattle encouraged us to "emphasize vocational skill training needed for living in the real world. If a student does happen to be of a scholarly frame of mind, that's fine. That's why we have colleges and universities. But the notion that everyone, regardless of personal inclination, should go on to a formal four-year institution is ridiculous." Many of our other respondents reacted in the same way. A stock clerk in the navy said: "Having a blue collar job and working with your hands does not necessarily mean a lack of intelligence." And a crane operator for the railroad in the state of Washington says that today's young people "should be taught that it is not a sin to work with their hands." Many people agree with the civil engineer who told us that "college and the degree have been oversold to high school kids."

One of the big changes in student interests and program offerings has been a steep increase in the number of certification programs. The proportion of college students majoring in the social sciences, humanities, and physical sciences has declined, while the number of majors in professional and vocational programs has increased.

Life-Styles

Campus life-styles have changed. Government financial aid programs reduced students' monetary dependence on their families with the result that many are less dependent on their parents' preferences. Few colleges today take seriously the old in loco parentis function, namely, that school administrators take the place of parents in supervising students' personal lives. Many colleges continue to have strict rules on the books about alcohol, drug consumption, and residence hall visiting hours for the opposite sex, but in reality these are often weakly enforced.

The proportion of students living in college housing dropped from a third in the mid-1960s to a fifth in the 1980s, as living arrangements shifted to private apartments. Today, only liberal arts colleges remain largely residential campuses.

Changing Institutional Emphases

Colleges have been responding to change since the beginnings of higher education in America. The first colleges, including Harvard and Yale, were established to maintain society's religious consciousness. The educational programs were primarily theological.

Today's colleges and universities offer career preparation for many students who would not have considered going to college a generation ago.

As society became increasingly diversified and secular, course offerings included professional training in law and medicine. After the Civil War the modern university emerged with emphases on agriculture, industrial production, engineering, science, and business administration. Since World War II higher education diversified and developed programs for various occupations including police officers, fire fighters, nurses, and skilled trades workers. Today's colleges and universities offer career preparation for many students who would not have considered going to college a generation ago.

Colleges enter the 1990s following two decades of difficulties. The boom times of the 1950s and 1960s were followed by the belt tightening of the 1970s and 1980s when growth rates tapered off and educational costs skyrocketed. Fear for survival replaced the optimism and expansiveness of the earlier eras. Some traditional departments in prestigious universities have shut down. A few colleges have gone bankrupt.

Recruitment. Today's colleges are faced with a very practical problem: how to keep classrooms full. Colleges concentrate on attracting more students. The strategies include lowering admission requirements, actively recruiting students ignored a few years earlier (minorities, females, older students, part-time students, married students), inflating grades so fewer students flunk out, emphasizing career preparation programs, making arrangements with companies to provide job-relevant continuing education programs for workers, advertising popular courses, and reducing faculty size. All of this has required a new breed of university administrators: people skilled in financial management rather than educational philosophy and policy.

The financial health of today's colleges overwhelmingly depends on public support and high enrollments, and higher education today responds to the demands of the marketplace. Colleges use marketing consultants and market research techniques, the kind used by soap and cigarette companies. Colleges advertise on roadside billboards, make their pitch on radio and in newspapers, buy mailing lists and mail unsolicited recruitment letters with shiny, four-color brochures to high school seniors–marketing techniques that were unheard of when we parents went to college. Higher education is part of today's consumer society. It caters to what the consumer wants and will buy.

There is a note of caution here: *caveat emptor*, let the buyer beware. The emphasis has shifted to attracting new students because that's where the revenues come from. Colleges' primary concern may not always be to turn out finished products or to place those products in the labor force. Today's Ph.D. glut and overabundance of college graduates is ample evidence for higher education's ability to recruit, even into areas where the labor market is saturated! But that doesn't mean that a job and career are waiting after college. Many a family has been lulled into believing that, because a son or daughter was accepted for enrollment, somehow that young person was on the way to a promising career; but that isn't necessarily so. A doctor's daughter who started out in education told us: "I pursued study in the field of elementary education for two years before I found out that there were very few jobs available for graduates once finished, so I decided to drop out of college." She now works as a therapist in elementary and secondary schools in California.

Enrollment Outlook. The number of college age young people continues at a low ebb as we enter the 1990s as a result of the depressed birth rates that followed the baby boom, and this will continue for several more years. That means that colleges may have to expand their recruitment efforts further if they are to survive. And some will have to cut back. In fall 1982, for example, the University of Washington eliminated twenty-four degree programs and reduced its enrollment by nearly five thousand over a three-year period. The changes were described by university president Gerberding as permanent reductions in size and scope.

So far colleges have done pretty well. The earlier prophets of doom with their forecasts of huge enrollment declines have been wrong. The recruitment efforts directed at new "buyers" have paid off. After peaking in 1981 and stabilizing in 1982 and 1983, higher education enrollment has declined only slightly. What happens in the years ahead will depend heavily on the federal government's education program, which tends to change with national elections.

During the decade ahead colleges and universities will have little choice other than to compete more effectively for student enrollments. While going after an even more diverse lot of education buyers at increased costs to the consumer, there will be more critics and skeptics who will argue that a college education isn't worth the cost.

Whether a college education is likely to pay in the 1990s is the subject of the next chapter. Before turning to that topic, I provide additional information on vocational preparation programs available in today's colleges and sort out the kinds of colleges that are available to today's young people choosing careers.

Vocational Preparation Programs

There is much confusion about what vocational preparation is. People say that vocational preparation is "trade courses in high school," it is "what community colleges offer," "what technical schools do," or "a special program in four-year colleges." What vocational preparation is gets even more confusing if you look at the definitions used by the National Institute of Education, the National Center for Education Statistics, or the Bureau of the Census. Perhaps that is why the Carnegie Council on Policy Studies in Higher Education published a chapter in a book with this titled "Vocational Education: Change Everything, Including the Name."

When I use the concept vocational preparation, I mean two things: programs in which the primary goal is to provide skills at the technical, paraprofessional, and skilled occupation levels; and programs that are usually of shorter duration than four-year baccalaureate programs. Often vocational preparation programs are shorter than two-year associate degree programs.

This definition includes degree and certificate programs offered by four-year colleges, two-year colleges, and technical schools. It excludes apprenticeships and on-the-job training programs. These also emphasize vocational preparation, but in these most of the day is spent on the job. Classroom instruction is given outside the normal workday, is less time consuming, and is geared to specific employer requirements. My definition also excludes correspondence schools, where the primary mode of instruction is neither job-nor classroom-based.

Background

In 1963 Congress passed the Vocational Education Act. Passage gave formal recognition, increased visibility, new status, and multibillion-dollar financial impetus to vocational programs. Today, there are about 10,000 institutions that provide some form of vocational preparation for more than six million students. Four of five high school students go on to some type of postsecondary schooling within twelve years after high school graduation. A third enroll in vocational preparation programs. About one in seven enroll in a vocational preparation program within a year and a half after high school graduation.

If the above proportions continue to hold, as I expect they will, more than 400,000 students from this year's high school graduating class will enroll in some kind of vocational preparation program within eighteen months after high school; and more than 900,000, nearly a third of the graduates, will enroll in a vocational preparation program within twelve years. Apparently, more and more young people agree with what a firefighter with ten years' experience told us: "College should not be de-emphasized; but vocational education should be emphasized more."

Major Program Areas

There is no single system in general use for classifying vocational preparation programs. However, the National Center for Education Statistics classified 66 subbacalaureate awards in 1987, and 85 percent of the less than 1-year awards were given in five general areas (Table 7:1).

Health services is the largest single area, followed by business and management, engineering technologies, protective services, and visual and performing arts. The number and types of programs available varies by institution and region of the country. Some schools specialize in a single occupational area. For example, for years nearly half of technical education students in Michigan were enrolled in electronics technology. Other schools and regions offer a more diversified menu, and chances are that a more varied selection of programs is available in your area.

Table 7:1. Percentage of Less Than 1-Year Subbaccalaureate Awards by Major Program Areas

Program Area	Percentage
Health Sciences	33
Business and Management	27
Engineering Technologies	15
Protective Services	6
Visual and Performing Arts	6
All Others	15

Occupations

There are many areas for which specialized training is required, and vocational preparation programs provide the necessary training for many of them. It's not an entry ticket to all occupations; and its not the best form of career preparation for some occupations; but it is a good way to prepare for many occupations.

It's not easy to determine whether a vocational preparation program is the best way for your son or daughter to prepare for a particular career. There are a lot of things to consider:

> What occupation is your son or daughter thinking about?
>
> What are the minimum and what are the preferred entry qualifications for that occupation?
>
> What colleges offer vocational preparation for that occupation?
>
> What is your son's or daughter's potential?

Each of these must be considered, and there is no pat answer. However, I can give you some sense for how vocational preparation programs fit into the grand scheme of things, and some guidance for figuring out your particular situation.

Think again about the occupational projections reported in chapter 5. I differentiated there, as I have throughout this book, between projections based on size and projections based on growth rate. It's an important distinction. To illustrate how vocational preparation programs relate to employment possibilities, consider what form of career preparation might be advised for the top ten occupations projected to have the most employment openings over the next decade (Table 7:2).

Before commenting, allow me to also list the top ten occupations projected to have the fastest growth rates together with the form of career preparation that is advised for each (Table 7:3).

Table 7:2. Preferred Career Preparation for the Ten Occupations with the Most Employment Openings, 1986 - 2000

	Preferred Education/Training		
Occupations	High School	Vocational	College
Sales Workers, Retail	*		
Waiters and Waitresses	*		
Registered Nurses		*	
Janitors and Cleaners	*		
General Managers and Top Executives			*
Cashiers	*		
Truck Drivers		*	
General Office Clerks		*	
Food Counter and Related Workers	*		
Nursing Aids, Orderlies, and Attendants		*	

Table 7:3. Preferred Career Preparation for the Ten Fastest-Growing Occupations, 1986 - 2000

	Preferred Education/Training		
Occupations	High School	Vocational	College
Paralegal Personnel		*	
Medical Assistants		*	
Physical Therapists			*
Physical and Corrective Therapy Assistants and Aids		*	
Data Processing Equipment Repairers		*	
Home Health Aids	*		
Podiatrists			*
Computer Systems Analysts			*
Medical Records Technician		*	
Employment Interviewers			*

Observations. Three observations are especially noteworthy about the preferred education and training for these twenty high-opportunity areas:

> Notice that for the twenty occupations, both groups combined, vocational preparation is the single most preferred form of preparation.
>
> High school is adequate for more occupations that have many employment openings than for occupations with fast growth rates.
>
> The general rule of thumb is that the more education and training a person gets, the better are his or her employment prospects.

People with a high school diploma and vocational training qualify for a larger number of occupations than do people with only a high school diploma. A college education usually opens still more areas for possible employment. In my opinion, college plus vocational preparation puts a young person in the strongest employment position.

"Reverse transfers", people returning to two-year and technical colleges for skill training after getting a four-year degree, has become increasingly common and rewarding. In the Career Development Study of the early careers of 7,000 young men and women from the time they left high school until age thirty, nineteen percent took some college, then entered a vocational preparation program; fifteen percent took vocational preparation first, then some college; and 14 percent had both a college degree and some form of vocational preparation.

The point is that there are vocational preparation programs that either prepare a young person directly for an occupation or complement high school diplomas and college degrees in ways that give a person an employment advantage. Young people do not always know the connection between degrees or certificates and jobs. Take the case of this young lady who graduated with a bachelor's degree in psychology from a college in New Mexico. The biggest problem she said she faced was "deciding early in high school the degree I wanted to pursue, but having no real knowledge of the job(s) this degree would qualify me for."

The best way to determine what form of education and training is preferred for a particular occupation is to read about the occupation in the *Occupational Outlook Handbook*. The best place to find out where a particular vocational preparation program is offered is in the *College Blue Book* or comparable reference books on vocational programs.

Information Limitations. Information on the employment outlook in areas for which vocational preparation programs are available is more limited and fragmented than is the outlook for areas served by four-year college degree programs. This is a problem for people thinking about enrolling in a vocational preparation program. Vocational programs are rather recent additions to the U. S. education/training scene, the programs have been experiencing rapid growth and change, the areas are not yet conceptualized into standard categories, and very few studies of the effects of vocational preparation on later careers have been done. As a result the information about vocational preparation programs is less reliable than that available for college degree programs.

Institutions and Costs

Vocational preparation programs are offered in two-year colleges, technical schools, and four-year colleges. Two-year colleges, junior and community colleges, are the most popular settings and enroll two-thirds of all students in vocational preparation programs. Another fourth are enrolled in technical schools and the remainder, about five percent, are enrolled in vocational preparation programs in four-year colleges.

Costs for attending vocational preparation programs vary. Tuition charges at most public two-year colleges are modest. Often students in two-year colleges live at home and commute with the result that transportation costs increase but room and board costs remain about the same as when the student was in high school.

Tuition charges in proprietary schools–that is, for-profit business, trade, and technical schools–are based on a flat fee for a particular program. Sometimes the fee includes costs of books and supplies.

Comparitive Costs. There is no direct comparison of tuition costs between public and proprietary schools. Community colleges list programs in terms of credit hours, whereas proprietary schools list programs in terms of duration–that is, weeks. In community colleges students spend between fifteen and twenty hours in the classroom or laboratory, but in proprietary schools students generally attend between twenty-five and thirty hours per week. That gives them about one-third more instruction time per week.

Other differences that make cost comparisons difficult include whether a person views the general courses offered in community colleges as a bane or a bonus; whether the flat rate of the proprietary school includes books, supplies, and fees that are extra assessments in two-year colleges; and whether income deferred in programs of longer duration in two-year and four-year colleges is viewed as a cost. Parents and their sons and daughters will want to consider the relative costs from a number of different perspectives.

Kinds of Colleges

The changes that have gone on in higher education over the past quarter centry, including the development of vocational preparation programs, have changed the forms that today's colleges take.

Earlier, I suggested that a basic decision young people headed for college must make is whether to enroll in a degree or certificate program. In today's colleges both degree and certificate programs are likely to appear in the same institutions. It is no longer the case that you go to college if you want a degree, and you go to a voc/tech or trade school if you want a certificate. Both degrees and certificates may be pursued in many colleges, and vocational preparation studies may be in either degree or certificate programs.

A basic decision young people headed for college must make is whether to enroll in a degree or certificate program.

In the following sections I identify the main kinds of colleges that exist on the current educational scene. I make a basic distinction among three kinds of colleges: four-year colleges, two-year colleges, and technical schools. I discuss three kinds of four-year colleges: liberal arts colleges, specialized colleges, and comprehensive universities. I also refer briefly to doctoral and professional degree-granting institutions. I then discuss two kinds of two-year colleges: junior colleges and community colleges. I discuss vocational preparation programs in the context of four-year and two-year colleges. Finally, I consider business, trade, and technical schools.

My purpose is to explain to parents and young people how these institutions are similar and different and what programs are identified with each.

Four-Year Colleges

When people use the word college, they often have in mind one of the more than 2,000 four-year colleges that offer programs of study leading to a bachelor's degree. I use the word more broadly to apply to all institutions that offer training and education beyond high school; so it is important to differentiate kinds of colleges.

Colleges offer specialized groups of courses, and the nature of the programs distinguishes three kinds of four-year colleges: liberal arts colleges, specialized colleges, and comprehensive universities. College and university enrollments grew rapidly in the 1960s and 1970s, then slowed during the late 1970s. Today, college and university enrollments are about 13 million and will probably remain within one percent of that figure over the next five years. Growth in four-year colleges has not kept pace with growth in two-year colleges, however. According to the National Center for Education Statistics, the proportion of students in four-year colleges declined from 74 percent to 63 percent between 1970 and 1985, and the proportion of full-time students declined from 68 percent to 58 percent.

Four-Year Liberal Arts Colleges. Four-year liberal arts colleges offer general programs of study in the arts, humanities, social sciences, and sciences.

The arts includes courses of study in people's conscious use of skill, taste, and creative imagination to produce objects that are esthetically pleasing. Music and drama are examples of arts.

Humanities refers to branches of learning that are primarily cultural and have to do with the development of intellectual and moral faculties. Courses in cultural anthropology, English, literature, and comparative religion are examples of humanities.

Social sciences study how people relate to each other. Sociology and political science are examples.

The sciences, as defined in liberal arts colleges, refers to systematized knowledge governing general truths or the operation of general laws. The natural sciences–physics, chemistry, and biology–are examples of courses in the sciences offered by four-year liberal arts colleges.

Within the general programs of study, liberal arts colleges offer a major in specific areas such as mathematics, literature, political science, psychology, or biology. A college major is the particular field of study in which a student chooses to concentrate.

Four-year liberal arts colleges award a Bachelor of Arts degree (B.A.). They may also be distinguished by their sponsorship and size. Most are private or denominational colleges, and most have fewer than five thousand students.

Four-Year Specialized Colleges. Specialized colleges put more emphasis on career preparation in a specific area such as business, engineering, education, agriculture, music, art, or home economics; and they put less emphasis on liberal arts. Specialized colleges offer four-year programs that culminate in a bachelor's degree, usually the Bachelor of Science (B.S.).

Although there are still a few four-year colleges that offer only a Bachelor of Arts or a Bachelor of Science degree, today's four-year colleges offer a variety of degrees and, sometimes, certificates. The trend is away from single-focus institutions to institutions with expanded course offerings.

Universities. Universities are the best examples of four-year institutions with expanded course offerings. Colleges offer specialized groups of courses, and when several colleges are brought together under one administrative unit, it is called a university. The prefix "uni-" emphasizes the presumed oneness or unity in the course offerings, though "multiversity," which emphasizes the plurality of colleges and the diversity of course offerings, would be a more appropriate label for today's universities.

The distinguishing feature of four-year colleges is that they offer four-year programs of study and award bachelor's degrees. They may be differentiated by the number of specialized groups of courses they offer, those ranging from simply a Bachelor of Arts program to the multiple specialized programs offered by universities. To be sure, there are four-year colleges that offer several programs of study and there are universities that offer few. At those points the difference between colleges and universities blurs.

The distinction between colleges and universities goes beyond the number of undergraduate degree programs offered, however, and extends to graduate programs of study–that is, programs of study and degrees beyond the bachelor level. In addition to undergraduate programs, universities may offer graduate programs leading to the master's degree. The Master of Arts (M.A.) and Master of Science (M.S.) degrees are the most common, though other examples include the Master of Business Administration (M.B.A.) and Master of Social Work (M.S.W.). Some university graduate schools also offer the most advanced degrees, the Doctor of Philosophy degree (Ph.D.) or other professional degrees such as law (J.D.) or medicine (M.D.).

Vocational Preparation in Four-Year Colleges. The career education movement of the 1970s encouraged institutions to expand course offerings to include areas of vocational preparation. The career education movement had these important effects on the nation's four-year colleges:

> Many liberal arts colleges added programs in business, engineering, health-related areas, and the like, that went beyond traditional liberal arts offerings.
>
> Large numbers of students enrolled in career preparation programs rather than in liberal arts programs.
>
> The distinctions between liberal arts and career preparation programs became blurred.
>
> There was increased pressure on colleges to offer higher level degrees, especially master's degrees, for short-term specialized courses.

Computer sciences and health profession programs grew most, while mathematics, library science, letters, foreign languages, and social sciences experienced the greatest decrease during the 1970s. In 1986, 26 percent of college-bound seniors chose business, the most popular choice of major fields.

Today's four-year colleges have broadened their programs of study in two ways: They offer multiple bachelor degree programs and often include career preparation programs. Four-year colleges continue to be oriented to bachelor's degree programs, but about 600 four-year colleges offer undergraduate programs that lead to a two-year associate degree or certificate and attract 5 percent of all students enrolled in vocational preparation programs.

Two-Year Colleges

There are about 11,000 institutions that offer some type of postsecondary education. Of that number 1,400 are two-year colleges that enroll 5 million students.

The label, two-year colleges, refers to the time required for a full-time student to complete requirements for an associate degree. The two major types of two-year colleges are junior colleges and community colleges. Both offer associate degree programs and, often times, some assortment of certificate programs.

Junior Colleges. Junior colleges and community colleges have different origins. Junior colleges are older. They were originally established to offer courses that parallel freshmen and sophomore programs at four-year colleges and universities. Junior colleges were established as "transfer institutions" that high school graduates could attend for two years and then transfer to a four-year college or university, often farther away from home and at higher costs.

Many junior colleges maintain strong liberal arts programs, though, since World War II, almost all have expanded their programs to appeal to the same diverse populations as community colleges. Today's junior college is hardly any longer distinguishable as a transfer school.

Community Colleges. The Vocational Education Act of 1963 stimulated the development of community colleges, which emerged with a character of their own. Unlike junior colleges that began with an emphasis on liberal arts programs, community colleges developed in response to industry demands for employees at the skilled, technical, and paraprofessional levels.

Community colleges have diffuse goals and programs. Open-admission policies invite all adults, whether or not they are high school graduates. Community colleges offer a wide variety of programs and appeal to diverse interests and needs. Local services vary but generally include instruction in convenient locations and flexible times.

Community college open-admission policies are an outgrowth of the Great Society programs of the early 1970s and Lyndon Johnson's goal to provide educational opportunities to the extent of every person's interest and ability. Open admission means that almost everyone can enroll without regard for high school grades or performance requirements on entrance examinations. Generally, community colleges require a high school diploma or equivalency credit, but some will admit anyone over eighteen years old. Convenient locations, flexible hours, and low tuition bring programs within reach of large segments of the population that otherwise were denied further education and training. Almost every sizable city has at least one community college, and most colleges extend classes to off-campus sites.

Today's community colleges are often part of a statewide college system designed to meet the varying needs of diverse populations. The number of community colleges increased dramatically over the past decade. In recent years community college enrollments have been increasing faster than any other kind of college. Part of that is due to a new phenomenon on the U.S. education scene, "reverse transfers", students who come to community colleges from four-year institutions.

Vocational Preparation in Two-Year Colleges. Today's junior colleges and community colleges offer a blend of vocational preparation and other types of programs:

> Associate degree and transfer programs that may be accepted for credit at four-year colleges.
>
> Vocational-preparation programs that may grant an associate degree or certificate to students seeking employment soon after finishing high school.
>
> Noncredit life enrichment courses that are offered apart from a more comprehensive academic program or a vocational preparation program.

The distinction between degree and certificate programs may be fuzzy at the two-year college level. The two coexist, as the listing of programs indicates, but how they coexist varies from one two-year college to another. Some offer programs of study that integrate degree and certificate studies. Sometimes the only difference is that the degree program adds general courses in the humanities, social sciences, and natural sciences. Under other circumstances the programs are under the same roof but operate quite independently.

When it comes to preparing for a career in the 1990s, taking a college degree program is one way to go. Taking a vocational preparation program leading to a certificate is another way to go.

Over half of today's students who enroll as college freshmen attend two-year colleges. That is one of the big changes in college enrollments over the past decades. Another significant change has been the dramatic increase in vocational preparation programs available to today's young people. When it comes to preparing for a career in the 1990s, taking a college degree program is one way to go. Taking a vocational preparation program leading to a certificate is another way to go.

Technical Schools

Business, trade, and technical schools–to keep it simple, I refer to them all as technical schools–award certificates, but generally they do not award degrees. In that sense they are noncollegiate, even though some include the word "college" in their name. Although I include them in my broad definition of colleges, I prefer to think of them as schools to remind the reader that they are noncollegiate institutions. They do not grant degrees.

Technical schools developed along several lines. Some were offshoots of engineering colleges, and others rose in response to an imbalance in labor-market supply and demand. Technical schools are similar to two-year colleges in that both offer vocational preparation programs. They differ from two-year colleges in that technical schools are concerned almost exclusively with preparation for immediate employment; offer more detailed training of shorter duration than that offered in two-year colleges, though some technical school programs may extend beyond two years; are not likely to include general subject matter in their vocational preparation programs; and do not offer credit transfer programs that are aligned with four-year college programs.

These may be advantages or disadvantages, depending on the point of view that parents and young people have. In contrast to the open-admission policies of community colleges, technical schools may be very selective, and the competition for admission to highly specialized programs may be fairly intense. Training is strictly technical and geared to specific occupations. By comparison, community colleges balance specialization with breadth by including some general course offerings in their vocational preparation programs.

Types of Technical Schools. There are about 8,500 schools in the technical school or noncollegiate classification. Table 7:4 provides rough estimates of the types and proportions of schools.

Table 7:4. Types and Proportions of Technical Schools

Type of School	Percentage
Vocational/Technical	9
Business/Office	18
Cosmetology/Barber	28
Flight School	12
Trade School	10
Art/Design	3
Hospital School	11
Allied Health	5
Technical Institute	1
Other	3

About one out of four vocational students enrolls in a technical school. Technical schools may be either public or private. Nearly a half-million students annually enroll in public technical schools and about one million enroll in private schools.

Private technical schools are of two types: proprietary and nonprofit. Nearly two-thirds are proprietary, and I limit the following discussion to that group.

Proprietary Technical Schools. Most proprietary schools are small businesses, though some are operated by large corporations including International Telephone and Telegraph, Control Data, and Bell and Howell. Most train students in only one or two areas though some offer extended courses. Enrollment may vary from fewer than ten (usually hospital schools) to more than a thousand students, but the average is around three hundred. Only about half of proprietary schools are accredited.

Proprietary schools probably offer more flexibility than any other kind of school. Courses may begin as often as twelve times a year, and some schools enroll new students weekly. Morning, afternoon, and evening classes are usually available. The class schedule is intensive and may last five to six hours daily. The average student has fewer hours of assigned homework than the two- and four-year college student. Nearly all proprietary school students work part-time.

Proprietary schools emphasize practical, hands-on experience. Normally instruction is modular and competency-based, meaning that each study unit can be repeated until the student meets the required skill level.

Many proprietary schools have full-time placement staff and virtually all present their programs in terms of job-placement prospects. Most schools will not guarantee placement, yet their reputation depends heavily on their ability to help their students find jobs upon graduation. A few offer college equivalency courses and grant specialized associate degrees.

Summary

Today's young people can pursue their degree or certificate interests in a variety of institutional settings. Four-year colleges continue to be the primary route to a bachelor's degree and provide the basics for advanced degrees. Two-year colleges provide a mix of associate degree and certification programs that vary with the particular junior or community college. Technical schools offer certificates in areas of local consumer interest and demand.

These distinctions are an oversimplification, to be sure. Certificates are also awarded by four-year colleges, and some technical schools award associate degrees. Yet the distinction between degree and certificate programs represents a fundamental difference in how people view the preferred outcomes of education and training programs. Whether they seek a broad and generalizable education, specific vocational preparation, or some combination of the two will largely determine what kind of college or school best suits their career interests.

Eight

Does College Still Pay?

It costs at least $100,000 to raise a child to age 18, $89,000 in the rural Midwest and $112,000 in the rural West, according to the USDA. Of course, if you want to include a college education, then the tab increases another $80,000.

With college costs increasing, cuts in appropriations for federal financial aid, an oversupply of college graduates, and primary demand for workers in service industries, is a college education worth the cost? Is the cost of a diploma worth its price in tuition, room, board, and four years without income? How does the earning power of a $5,000 vocational certificate compare with the earning power of a $80,000 sheepskin? Those are fair questions to ask if you are a parent and face the prospect of picking up much of the tab. They're also reasonable questions for young people to ask.

None of us has a crystal ball with which to view the future, but we do have information about the past, knowledge of trends, studies that provide some sense for how things are changing, and a good idea of whether a college education will be worth it in the future.

I limit this discussion to two kinds of programs: four-year college degree programs and vocational preparation programs. First I ask: Will a four-year college degree pay in the future? Then I ask: Are vocational preparation programs likely to be worth the cost?

Four-Year College Degrees: Are They Worth It?

There are different ways to consider whether a four-year college education is likely to "pay" in the years ahead. One way is to look at college as an economic investment. A college education will cost a certain amount of money, and that investment should pay off in dollars and cents. That's the cost-benefit approach to answering the question.

College as an Economic Investment

The annual cost of a college education has been increasing, plus it now takes most students five years rather than four to get through. At the same time, the job market for college graduates has been getting tighter. Some argue that "the juice has to justify the squeeze," that the principles of investment-returns analysis should be applied to education just like anything else.

A college education has definitely been "worth it" in the past.

These analysts view education as an investment in people in much the same way they would look at buying stock as an investment in a business. It's a "human capital" approach. People can invest in many different things. The question is whether investing in a college education is likely to yield a better return to the individual than investing in noncollege opportunities like stocks, bonds, and real estate.

From an economic point of view, where would you put your money? In college? Or in the markets?

Past Investment Returns. A college education has definitely been "worth it" in the past. College degrees have produced higher lifetime earnings. The demand for college graduates has been especially high in professional and technical occupations. During the 1960s the average lifetime income of a white male with a four-year college degree was almost $200,000 more than the earnings of a high school graduate. The 1960s were good years to enter a career because the number of jobs was greater than the supply of college graduates. From 1962 to 1969, roughly 575,000 college graduates entered the labor force each year, and 73 percent went into professional and technical jobs. Those jobs paid well.

But things changed dramatically during the 1970s. Twice as many college graduates entered the labor market annually as during the decade earlier, and college graduates faced stiffer job competition. Then the economy went sour. Many people began to believe what a city fireman told us in the Career Development Study: "This is probably an old argument, but I believe that more vocational type courses are needed.... Most classes were geared toward a college education, but in reality only a minority attended college and many of those got jobs not requiring a college education."

During the early 1980s businesses trimmed administrative positions and "lean at the top" management styles took over. Graduates experienced difficulty finding high-paying positions and movement up the job ladder slowed down. Less than 50 percent entered professional and technical jobs, down more than a third from a decade earlier. In greater numbers graduates went into managerial and administrative positions, sales, clerical, craft, operative, laborer, service, and farm worker jobs, or they were unemployed. A fourth took jobs that traditionally were not held by four-year-college graduates. College graduates' lifetime economic advantage over high school graduates declined.

The annual rate of economic return on the cost of a college education averaged 10 percent or more over the thirty-year period from 1939 to 1969. That was as good or a better rate of return than most other investments posted over the same period. In 1969 the rate of return for college education was 15.4 percent for men and 17 percent for women. Then the rate of return began to drop and by 1973 it stood at 12 percent. Today, the annual rate of return to the investment cost of a four-year college degree continues at about 12 to 13 percent for men and 14 to 15 percent for women.

College graduates earn over twice as much annually as do high school dropouts.

These calculations take into account the cost of a college education, which may be substantial. They also take into account the differences in increased earnings for individuals over their lifetime. Men with four years of college can expect lifetime earnings between one and a quarter and three million dollars while male high school graduates can expect earnings in a range from one to two million dollars. Lifetime earnings for females with four years of college are two-thirds to one and a quarter million dollars, and the earnings range for females with high school diplomas is from one-half to one million dollars. Lifetime earnings for college graduates are about double the earnings of high school graduates.

Annual Salary Differences. Comparisons of annual salaries is a second way to examine the economic returns to a four-year college education. When these comparisons are made, the dollar return to investments in education and training are apparent (Table 8:1). Workers with more education earn more.

Table 8:1. Annual Earnings Differences by Level of Education, 1986

Education	Annual Earnings
4 or more years of college	$33,443
1 to 3 years of college	$23,154
4 years of high school	$19,844
Less than 4 years of high school	$16,605

The differences in earnings power, the advantage to those with more education and the disadvantage to those with less, is dramatic. Those who graduate from high school have a 20 percent annual earnings advantage over those who dropout. Those with some college have a 17 percent advantage over high school graduates and a 39 percent advantage over high school dropouts. Finally, those with four or more years of college have a 44 percent annual earnings advantage over those with 1 to 3 years of college, have a 69 percent advantage over high school graduates, and have a 101 percent annual earnings advantage over high school dropouts. College graduates earn over twice as much annually as do high school dropouts.

Workers with more education are also less likely to be unemployed (Table 8:2). Again, employment rates are directly related to level of education. The unemployment rate for high school dropouts is five times higher than that for college graduates. The unemployment rate for high school graduates is three times higher than that for college graduates. And the unemployment rate for young people with 1 to 3 years of college is twice as high as it is for college graduates.

Table 8:2. Unemployment Rates by Level of Education, 1986

Education	Unemployment Rate
4 or more years of college	2.3 %
1 to 3 years of college	4.5 %
4 years of high school	6.9 %
Less than 4 years of high school	11.6 %

In summary, workers with more education earn more and are less likely to be unemployed. A college education has definitely been "worth it" in the past in terms of a return on the investment, and it is clearly worth it today in terms of annual earnings and employment stability.

Investment Prospectus. Over the past decade roughly 10 million college graduates entered the labor force, but nearly a third had to take jobs that did not require a four-year degree. College graduates will continue to have an advantage over high school graduates when it comes to employment, but college graduates will face increasing competition in many fields from community college and technical school graduates with job-related skills.

All indications are that college graduates will continue to have an employment advantage in the future, just as they do today.

The employment outlook is not as rosy as it once was for four-year-college graduates, but that does not mean that the future looks bleak. Consider unemployment rates. College graduates invariably fare better than high school graduates when it comes to claiming available jobs. For example, a few years ago when national unemployment rates were as high as 10 and 11 percent, the highest since 1941, unemployment rates for college graduates were at 6 percent, just a bit higher than half the national unemployment rates and comparatively very favorable. All indications are that college graduates will continue to have an employment advantage in the future, just as they do today.

Lower unemployment rates mean that college graduates have more stable incomes. In addition, college graduates usually have better benefits packages: sick pay, health insurance programs, and employee assistance programs. Lower unemployment rates together with employment in better paying positions with better benefit packages continues to boost the college graduates' economic condition above that for high school graduates; and there is nothing on the horizon to suggest that these trends will change.

Of course, what happened in the past is no guarantee for the future. Nonetheless, one way to project the future is to look at the past and extend the trends. I offer three observations:

> In terms of return on investment and annual earnings differences, there have been substantial economic benefits to a four-year college education in the past.
>
> The extent of the economic benefit of a four-year college education has decreased over the past two decades.
>
> There continues to be an economic advantage for those who have a four-year college degree, and the advantages are likely to continue in the years ahead.

The calculation of returns on investment approach takes into account that while higher education costs have increased, the costs to individuals have not outpaced inflation until very recently. Except for the last few years, the investment costs have remained fairly constant. Only the returns have changed. They have decreased. The same outcomes do not necessarily apply to every college program and degree, and the outcomes do not tell us how our children will fare in the future. However, they do suggest a cost-benefit return to a four-year college education for the total work force if the long-term trends continue.

Return on investment percentages are based on average lifetime incomes, and salary difference percentages are based on average annual incomes. My best guess is that four-year degrees will continue to pay economic dividends of, say, at least 10 percent annually, and salary advantages of, perhaps, 20 percent per year for those who graduate from college in the foreseeable future. I fully anticipate that college graduates will continue to earn considerably more over their lifetimes than do high school graduates, though the differences are not likely to return to the large advantages enjoyed by college graduates in the 1960s. People who believe what a hospital administrator told us, that today "blue-collar labor earns the same or more than most college graduates," should remember that the increased wage levels of blue-collar workers is largely due to their increased education levels.

Figuring out the economic returns on a college education is an important and interesting question, but it isn't the only question to ask and, from my point of view, it isn't the most important question. Some years ago Stanford University Provost Al Hastorf suggested a very practical consideration: "Don't study what you think is going to have a big economic payoff, because that may not be true ten years from now." The point is that there are also noneconomic ways to assess whether a college education is likely to pay in the future.

Noneconomic Returns

Noneconomic consequences refers to the other than financial effects of a college education? How does college affect a young person's development, attitudes, behavior, way of thinking, and life-style? Each young adult is a unique person, and no one can say how college will affect a particular individual. But studies indicate how college life and education affect young people in general. They offer a rough guide for what parents can expect.

Knowledge and Thought. The evidence is persuasive that four years of college raises people's knowledge level and the quality of their thought processes. Studies also show that a college education leads to moderate increases in ability to communicate, intellectual tolerance, aesthetic sensitivity, and to small increases in mathematical skills, rational thinking, and creativeness.

Students gain in their ability to think critically. They are more reflective and show greater intellectual flexibility and independence of thought. The ability to think independently is associated with individual enjoyment, on the one hand, and with career advancement, on the other. A librarian in Seattle made the same point: "I was told that this [going to college] would be necessary in order to get a good job.... Of course, I know that is not true. No one ever told me that ideas are exciting. Certainly no one ever encouraged me to question what my textbooks said or what it means to research an issue, to analyze information, to reach an informed conclusion.... I believe it is important to help students learn how to think independently, also to teach them the ability to learn on their own."

College-educated people are more future oriented than are noncollege graduates. They are more likely to defer immediate gratification for the sake of long-term benefits. College-educated people do more planning. They take more reasonable risks. Level of education is associated with being resourceful, being adaptable to change, and being willing to compromise and keep options open.

Education provides building blocks for the kind of learning and development that continues throughout life. The details of Outer Mongolian history, cell physiology, and baroque music may fade from memory, but what remains is the know-how for getting and organizing information, analyzing and thinking, tools that are useful and help people understand and work in our complex culture.

The ability to think independently has been cited often as a prized quality of citizenship in a democracy. In addition:

> College-educated people vote more frequently.
>
> College graduates participate more often in political and community affairs than do people who did not attend college.
>
> College graduates are more committed to the basic freedoms outlined in the Bill of Rights than are people who did not attend college.

Americans have long believed that education is crucial to the democratic process, and a college education favors a number of political attitudes and behaviors that are consistent with democratic ideology.

Beliefs and Values. Colleges provide young people with new experiences, influences, and challenges in contact with people from different backgrounds and ideas. The mark of today's university is its diversity. Life on campus, both in and out of the classroom, challenges young people to think things through for themselves.

That doesn't mean that a student is likely to go through a drastic personality change over the college years. On the contrary, value change studies show that colleges generally accentuate or anchor personality tendencies that were already present when the young person entered college. There are always exceptions, but major personality changes are not the general rule.

When it comes to values and morals, higher education encourages tolerance, permissiveness, and flexibility. College campuses often lead the way in social movements. For example, campuses have been in the forefront of movements toward greater sexual permissiveness and the unisex emphasis on men's and women's overlapping attitudes and interests. Some observers fear that the decline in conventional morality leaves college students without adequate values with which to structure their lives. Others argue that the movement away from authority and dogmatic standards toward greater openness, tolerance, and honesty is a new, perhaps higher, kind of morality. Parents must decide for themselves.

A similar debate goes on concerning patterns of religious interests and beliefs on college campuses. Since the late 1950s, there has been a decline in the strength of religious values; but, at the same time, class enrollments in the formal study of religion and philosophy have increased. While adherence to traditional forms of religion has decreased, interest in the study of religion has increased.

Behavior. College student behavior–whether swallowing goldfish, rushing to the Florida coast over spring break, or frat house beer busts–makes good news copy; and studies show that changes in behavior among college students include an increase in such negative behaviors as drinking, smoking, partying, and gambling. These behavioral changes vary considerably between institutions, however.

Size of colleges makes a difference. Large institutions reduce a student's chance of involvement in campus activities, while small campuses increase the likelihood of interaction with faculty and participation in campus governance and athletic programs. Similarly, the few remaining single-sex colleges, whether all male or all female, also tend to be small and, therefore, increase the chances of involvement in academic pursuits, interaction with faculty, and classroom participation.

What happens to students also varies by gender. Women generally earn higher grades than men, yet women are less likely to stay in college and go on to enroll in graduate or professional schools. Aspirations for higher degrees increase among men more than among women. Women generally achieve in the areas of cultural knowledge, foreign languages, music, and homemaking. Men show higher levels of achievement in athletics, original writing, and in acquiring technical and scientific skills.

Higher education affects later consumer behavior, leisure, and health. Compared with noncollege-educated people at similar income levels, college-educated people spend less money on food, tobacco, alcohol, and automobiles, but more on housing, reading material, and recreation. College-educated people save a higher proportion of their incomes.

College graduates work longer hours and retire later in their careers than do noncollege-educated workers. College graduates have less leisure time, and they use it differently. They watch television less frequently but more selectively. College graduates spend more time reading, going to cultural events, taking part in community affairs, pursuing hobbies, and taking vacations. Generally speaking, college graduates are more discriminating in their behavior.

Family Life, Satisfactions, and Health. College education has lasting effects on people's personal lives, particularly family life. College-educated people marry at an older age and have fewer children. They devote more time to child care and are generally more involved with their children. College-educated parents spend proportionately more of their income on education and activities that foster the personal growth of their children.

There is a strong relationship between parents' levels of education and the intelligence and achievement levels of their children. By improving parents' levels of ability and motivation, a four-year college education has the spinoff effect of improving children's life chances. Education has a multiplier effect.

People with a college degree generally report that their work is more challenging and rewarding than do those who have completed only high school. That is probably because college degrees qualify people for more desirable jobs; more desirable jobs offer greater personal satisfactions;

and greater personal satisfactions on the job are associated with greater quantity and higher quality of productivity.

A college education has improved people's resources, opened career doors, and has prepared them to take better advantage of opportunities.

College graduates have substantially lower rates of disability than do people who do not attend college. Although the reason is not clear, college graduates are healthier than noncollege graduates. Perhaps they watch their health more closely and have the financial resources to take better care of themselves.

In summary, in the past a college education has improved people's resources, opened career doors, and has prepared them to take better advantage of opportunities. This is value received, whether measured as an economic or noneconomic consequence of education. Many people agree with a business woman, a bank officer in Reno, Nevada, who told us: "I believe that the biggest disfavor that can be done to young people today is to play down the importance of a college education and degree. I am faced everyday in the business world with individuals who are continually denied opportunities for the lack of a degree. They are frustrated and resentful of those who have the degree and regret their own inadequacy."

When economists calculate the advantages of increased schooling, they usually take earnings into account but fail to consider such intangibles as working conditions and quality of life. When these are factored into an individual's "true economic well-being", the value of education goes much beyond the increases in earnings that it generates. A study at the Institute for Research on Poverty at the University of Wisconsin-Madison concludes that economists' estimates may measure only about three-fifths of the full dollar value of an education.

Vocational Preparation Programs: Do They Pay?

Vocational education and career education are two congressionally mandated programs that are funded, in part, by the federal government. At the state and local levels there are corresponding entities in the form of vocational schools and vocational programs.

Vocational programs have been controversial for a number of reasons, but at the center of the controversy has been the question of how general or specific career preparation should be. Advocates of vocational programs reason that occupation-specific career preparation gives an employee an advantage in the labor market, whether or not there is job turnover. Opponents argue that occupation-specific training is inefficient because workers typically do considerable job hopping, particularly during their early years. The outcomes of vocational preparation programs are likely to remain in question until long-term definitive studies shed more light and less heat on the issue.

Knowledge about the outcomes to vocational preparation programs is limited for several reasons:

> Vocational preparation programs take many different forms and vary from one school to another.
>
> Vocational preparation programs are still relatively new, and there haven't been many long-term studies of the results.
>
> Vocational preparation programs have been controversial, emotionally charged, and political; it is difficult to evaluate them objectively.

With these realities in mind and the forthright acknowledgment that there is little solid information about the consequences of specific vocational preparation programs, I offer these observations and impressions of the outcomes of vocational programs. I consider the outcomes in terms of placement rates, economic benefits, and noneconomic outcomes.

Placement Rates

Private schools that participate in government-sponsored financial aid programs are required to keep records of placement rates, i.e., their ability to locate suitable jobs for their graduates. Placement rates are frequently available for public schools also. Because vocational training emphasizes occupational preparation, placement in an occupational specialty is the most common measure of program success. Placement rates are also used extensively for marketing and public relations purposes. For that reason the most attractive numbers are often the most quoted numbers.

True placement rates are not easily determined. The basis for calculating the rates–whether they should be based on all students who enrolled in programs including those who spent minimal time in training, just those who completed the program and are available for employment, only those placed in occupations related to their specialized training, or those placed in any occupation–varies from school to school and from one study to the next. What the "base" is and what "successful placement" means differs from school to school and study to study. There is no generally accepted way for calculating placement rates, and that's a problem.

An American College Testing study, for example, reports placement rates based on students who completed program requirements or were enrolled for at least four months. Placement rates for all but two programs were over 50 percent, ranging from 5 percent for science programs to 99 percent for registered nursing. As a result, those rates are based on only 57 percent of the total number of students. But, when the placement rates are calculated on the basis of the total number of students in each program, the rates decline by about a third. Only two programs, auto mechanics and registered nursing, remain above the 50 percent placement level. The average placement rate based on all students probably lies in the 40 to 45 percent range.

There are problems, then, with information reported on placement rates for vocational preparation programs. The problems have to do with the definition of successful placement and the method for calculating the rates. Definitive studies have not been done, and reports are inconsistent. The general pattern might indicate that about 50 percent of program graduates find jobs in their occupational specialties.

Economic Benefits

I review the economic benefits of vocational preparation programs in terms of unemployment rates and earnings. Again, few good studies have been done on these subjects. Nonetheless, increasing numbers of people agree with an airline flight attendant who told us: "College certainly benefits individuals, but it definitely is not necessary to 'make it.'"

Unemployment Rates. One measure of economic benefits to vocational preparation programs is a comparison of unemployment rates for people with various kinds and levels of education and training. Several state studies suggest that the unemployment rates for vocational graduates of community colleges are not very much different from the unemployment rates for the total population. Among sixteen- to twenty-four-year-olds, graduates of vocational programs are more likely to be employed than are dropouts from four-year-college programs, and the unemployment rates for community college graduates are equivalent to rates for four-year-college graduates. In a related study of twenty- to twenty-four-year-olds, graduates of vocational programs had unemployment rates two percentage points lower than high school graduates.

Three community colleges in California indicated that graduates of vocational programs "experienced significantly less unemployment than general curriculum graduates two years after graduation." However, twelve years after high school, participants in the Career Development Study, whose highest level of training was vocational certification, had the highest percentage of workers who experienced at least one period of unemployment, even more than high school graduates. The duration of their unemployment was shorter than it was for people with only a high school education. The same group held the largest number of jobs since high school graduation. People with some form of vocational training were a little more mobile than high school graduates, and neither group was as mobile as people with three or four years of college. The percentage of people with vocational certification who were employed full-time was higher than the percentage with only a high school diploma.

It seems that graduates of vocational preparation programs may have an employment advantage over high school graduates and college dropouts, but they do not fare as well as graduates of four-year colleges.

Many people with vocational training are very happy with their work and their prospects for the future. For example, this is what a journeyman heavy equipment mechanic in Oregon told us: "When I chose to pursue technical skills instead of college, people thought I was very foolish. Today I am a fully qualified heavy equipment mechanic working for a good company with a good future. Since leaving high school I have never been unemployed. I feel that college is important, but technical skills are the backbone of America."

Earnings. The primary measure of economic returns to education and training programs in our society is earnings, and the general rule is that the more postsecondary schooling a young person has, the higher that person's average yearly earnings are likely to be.

Studies also indicate that levels of hourly wages and yearly earnings are associated with levels of postsecondary training and education. For example, preliminary analysis of wages for people who were not self-employed in the Career Development Study indicates that people with some form of vocational preparation beyond high school averaged 3 percent more in hourly wages than high school graduates. People with a four-year college degree earned hourly wages 9 percent higher than people with some vocational training and 12 percent higher than people with only a high school diploma.

Economically, graduates of vocational programs fare better than high school graduates, but they do not fare as well as graduates of four-year colleges.

Economically, then, graduates of vocational programs fare better than high school graduates, but they do not fare as well as graduates of four-year colleges. Moreover, the favorable effect of education on earnings tends to increase over the work history so that by retirement age the differences are substantial.

Noneconomic Consequences

Few studies look at the noneconomic consequences of vocational preparation programs. In this section I cull the literature for what it suggests on the topic.

Educational and Occupational Satisfactions. One way to assess the noneconomic outcomes of vocational preparation programs is to examine the levels of educational and occupational satisfactions people report. In an American College Testing study, 92 percent of the students expressed satisfaction with their current jobs. Slightly more than 75 percent of the satisfied reported that they would complete the program again if they were to do it over. More than 75 percent felt they could not have obtained their current jobs without the training they received. Usually two-thirds or more felt that their training was necessary.

We examined many different forms of job satisfaction and general sense of well-being in our studies of the early careers of 7,000 young men and women and found no differences based on people's education and training.

A national study indicates that on eight of eleven measures of satisfactions the differences in satisfactions reported by individuals with four-year degrees and those with some vocational training was less than five percentage points. With respect to satisfaction with pay, security, and permanence, vocational program graduates were more satisfied than were college graduates. We examined many different forms of job satisfaction and general sense of well-being in our studies of the early careers of 7,000 young men and women and found no differences based on people's education and training.

In a study of the differences in occupational satisfactions of public and proprietary vocational school graduates, graduates of public schools were more satisfied with their jobs and rated their training more adequate than did graduates of proprietary programs. Graduates of public schools were more likely to say they would choose the same school if they had it to do over again.

There are few studies of educational and occupational satisfactions of graduates of vocational programs. In the few that have been done, the general finding is that graduates reflect positively on their training experience, see an advantageous relationship between their training and job placement, and are satisfied with their current occupations. This government secretary in Oregon is an example: "A fulfilling life and good jobs can be found with trade or business school and one need not feel incomplete without college." Similarly, a computer systems analyst told us his experience: "I spent several unhappy years with a bachelor's degree in my pocket, going from unemployment to menial job and back to unemployment. I went back to school, a community college, and received education and training in a technical field which has resulted in my being employed in a job which I find to be very interesting, challenging and satisfying."

Upward Mobility. One of the supposed values of education in general and of vocational preparation in particular is that the programs increase workers' opportunities and upward mobility. A few studies have tried to compare the gains made by people from different socioeconomic backgrounds.

A Florida study concluded that vocational preparation increased social and economic inequalities rather than equalized opportunities. The results indicated that people with higher social status benefited more from vocational preparation programs than did people with lower social status. The study also indicated that more high-social status individuals were served by vocational programs and that they received greater rewards than people with lower-social status.

This conclusion is supported by a study indicating that students with lower-social status were more likely to drop out and that earnings relate more strongly to a student's family-social status than to whether the student even completed the program. The observation that young men and women from higher-status families tend to benefit most from vocational preparation programs is generally supported by information reported in the annual reports of the Condition of Education published by the National Center for Education Statistics.

The Career Development Study reveals the average levels of occupational prestige that people with different levels of education and training achieve by age thirty. On a scale of 0 to 100, young people with only a high school education average occupational prestige scores of 35; with additional levels of education or training their occupational prestige scores range from 42 to 45; and with a four-year college degree, their occupational prestige scores are about 60. The more education and training a person receives, the higher that person's occupational prestige is likely to be.

Participants in the Career Development Study tended to score much the same on related work characteristics. People with only a high school education were least likely to be in a position with authority to hire and fire. Vocational preparation generally increased their authority, but not nearly as much as three or four years of college did.

So, also, responsibility to supervise others and to set pay rates was much more closely tied to three or four years of college education. A vocational certificate gave a person virtually no more authority in these areas than did a high school diploma. People with only a high school education had the most repetitious work; but people with a vocational certificate were the least likely to expect to be self-employed five years later. Apart from this exception it is generally the case that where forms and levels of training and education make a difference, people with three or four years of college have a clear advantage over high school graduates, and people with some kind of vocational preparation usually score somewhere between high school and college graduates.

Missouri Vocational Graduates

A good study of the effects of vocational preparation programs was recently completed in the State of Missouri. From 1981 to 1985 the study followed samples of vocational and non-vocational graduates from 13 area vocational-technical schools and the high schools from which the students came.

The Missouri study found that vocational graduates, as compared to non-vocational graduates:

> Earn more in annual salaries–a 15 to 20 percent advantage
>
> Have more job stability–the median number of months vocational graduates had worked at their current or most recent jobs was nearly twice as long as non-vocational graduates
>
> Have higher employment rates–an advantage ranging from 7 to 38 percent over the five-year period
>
> Have higher percentages holding full-time jobs–an advantage of 24 to 74 percent over the five-year period
>
> Are more confident of their ability to compete for employment after high school graduation–91 percent compared to 82 percent thought they would be able to compete "very well" or "fairly well" for a job after graduation.

The Missouri study also reported that, over the five-year period, an average of 58 percent of vocational graduates were employed in training-related jobs; unemployment rates of graduates ranged from 20 to 48 percent of the state and national rates; from 75 to 80 percent consistently reported that they were satisfied with their current or most recent jobs; and, over the five-year period, 87 to 92 percent expressed satisfaction with their educational program. The Missouri study provides several indications that vocational graduates fare better in the job market than do non-vocational graduates.

Graduates of vocational preparation programs reflect positively on their training and feel it favored them in their job placement.

There are comparatively few studies of vocational preparation programs, and those that do exist are of uneven quality. Nonetheless, on balance, graduates of vocational preparation programs reflect positively on their training and feel it favored them in their job placement. Vocational preparation programs successfully place about 50 percent of their students and, in some cases, perhaps more. Income studies support previous research that shows a relationship between levels of schooling/training and earnings. Similarly, there continues to be a strong connection between levels of schooling/training and how well people fare in the labor market.

College as a Decision-Making Process

There is yet another way to examine the benefits of a college education or vocational preparation program. Not much is written on the subject, but it has to do with the way education and training programs help students sort out their career options. Consider the following lifelike scenarios.

Susie's Story

I have always envied the little girl who, at age five, climbs on her father's lap, and a dialogue like this takes place:

Susie: "Daddy, I want to be a teacher. How can I be one?"

Father: "Susie, you have to keep going to kindergarten."

Susie: "Then what?"

Father: "Well, after a while you will be one of the big kids in grade school. Then you can go to high school and maybe play basketball or play in the band. If you work hard at your studies you can go to college where you will learn to be a teacher."

Susie: "How long do I have to go to college?"

Father: "Oh, four years or so. It depends on how well you like it. You can probably go longer if you want to."

The story ends with Susie happily skipping off saying, "Good, Daddy, that's what I want to do." Susie eventually goes to college and becomes a teacher, and everybody lives happily ever after.

I envy Susie's situation. From little on she seemed to know what she wanted to do. Some people are like that. But that's not the way things worked for me, and it may not be the way it works for your son or daughter. Many young people aren't sure what they want to do when they finish high school. They have some vague notions, enough to get them started in one program or another. But many college students change their majors by the time they graduate. That means they do a lot of soul-searching about careers over the college years.

I think that's good. While I envy Susie who knew what she wanted to do at age five, Daddy plotted out the course, and Susie followed in lockstep fashion, I envy today's young people just as much, the ones who have no idea what they want to do at age five, go through all the popular fantasies, aren't at all sure by the end of high school, but have the chance to go to college. College can help young people sort out their options and get them started on a career path. I think that's one of the most overlooked benefits of going to college.

Susie knew what she wanted to do with her life from little on, and college figured prominently in her plans. But what about college for young people who haven't made a career decision?

Buck's Story

Consider the tale of twin brothers, Buck and Bill. Neither has chosen a career. One goes to college because he doesn't know what he wants to do. The other doesn't go to college because he doesn't know what he wants to do. Both find themselves in the same dilemma, they don't know what they want to do; but they follow two different courses of action.

Buck graduates from high school but doesn't know what he wants to do with his life. He wasn't a super student, but he wasn't a dummy either. He could go to college, but he decides not to go because he doesn't know what he wants to do.

So Buck takes a job pumping gas. He makes some money and buys magnesium wheels and a high-powered stereo for his Trans Am. Buck meets Betty and within a couple of years there are three mouths to feed instead of two: Buck, Betty, and Bucky. Buck changes jobs to make more money for the family. Increasingly, he does what he has to. The days of doing what he wants to do are largely past.

That doesn't mean that Buck isn't going anywhere. He can still get on-the-job training, enter an apprenticeship, go to school part-time, or maybe return full-time, if he's lucky. I simply note that going straight to full-time work after high school probably was not the course of action that opened the most options for Buck.

Bill's Story

Twin brother Bill graduated from high school at the same time, got his diploma one step behind Buck and, like Buck, he's no dummy; but he isn't exactly scholarship material either. Like Buck, Bill doesn't know what he wants to do, so Bill goes to college.

From day one, Bill has to make decisions: Where should I go to school? What should I study? Do I want to go to a big school or small one? Can I afford it? Where can I get the money?

Bill isn't sure that it's going to be worth it. He has his doubts. Not only that, he has to take pre-enrollment tests. The results come back and Bill learns that he's strong in math but weak in English. He'll have to take a remedial course in English. Buck thinks he's nuts.

Bill isn't so sure about it either, plus he's scared. Registration week comes and off he goes to more testing, registration for courses that he never heard of, and getting to know his roommates, one from the Bronx and he other from Function Junction. What a zoo! Nobody forces Bill to make the big decision: What do you want to do with your life? But a lot of little things happen that bear on that decision. Six-week tests come back and Bill discovers that he'd better knuckle down in remedial English. He has to write term papers, and he should figure out what he wants to write about. Some guy down the hall talks him into going on a weekend canoe trip, so he tries that. Bill meets Jill. Jill has some strange ideas about politics and comes from a different religion. She talks with a funny accent.

The first semester ends and Bill gets his grades. He did better than he thought in some areas, worse in others. He has a chance to enroll in a special class, and he does that. He thinks about dropping a course, and he does that–another decision.

The semesters pass, and Bill finds himself very much involved in a zigzag, sorting out the subjects he likes and those he doesn't care for. He had to take a speech course. He didn't like that at all, so he stays away from communications. Bill was always good in math, but now he finds that there are all kinds of ways to use math. He knows an upperclassman studying to be an engineer, and that looks interesting. More and more he takes the courses that interest him, like drafting, and he sorts out areas that don't appeal to him, like Yugoslavian History 203.

Call it a sorting process, a sifting and winnowing, or a zigzag, the point is that going to college forces Bill to make many little decisions. He has to choose courses, and he keeps getting feedback from tests and term papers and grades that help him understand himself and a number of career possibilities, too. Chances are Bill will end up with a college degree in an area that interests him. That's not a bad set of tools and credentials with which to launch a career.

College–whether four-year, two-year, or technical school–isn't just for those who know what they want to do. It can also offer a wealth of experiences that help young people figure out their career interests.

In summary, a four-year college education has paid handsomely in the past. Economically, college education has been a good investment. In terms of its other effects, developing knowledge and the capacity for critical thought and generally having a positive effect on attitudes and behaviors, college education has improved people's resources and their life chances. The college experience gives many people a chance to identify their interests, develop their abilities, and prepare for a rewarding and satisfying career. Those benefits are likely to continue for young people who graduate from college in the future.

Nine

Choosing a College

Choosing a college can be confusing and frustrating. It can produce anxiety because college choice comes early in a young person's career, awakens parents to financial realities, and alerts both to the fact that the time for leaving the nest is fast approaching.

Choosing a college involves three steps: deciding what a young person wants from the college experience, deciding which colleges and programs offer what the young person is looking for, and working out finances. In this chapter I consider young people's goals and interests, sources of information about colleges, and college admissions tests. I discuss financial aid in the next chapter.

Personal Goals and Interests

Young people may enroll in a particular college for different reasons:

Because Mom or Dad went there
Because it's close to home
Because it's far from home
Because a best friend goes there
Because a counselor went there
Because they didn't know where else to go

Under certain circumstances each of these reasons may be compelling, but ordinarily there are better reasons for choosing a college.

The most important reasons have to do with a young person's goals. As young people think about what they want from college, they should consider the way they are today and the way they would like to be in the future–say, four or five years from now. Young people have considerable choice about how they will be and what they will become. That's what the business of choosing a college is all about.

Four of five positions available today require some kind of preparatory education or training beyond high school.

College should help a young person reach one or more personal development or career preparation goals. Four of five positions available today require some kind of preparatory education or training beyond high school. College–whether four-year, two-year, or technical school–is one way to get that preparation. If parents and young people conclude that going to college is the best way to achieve the young person's goals, then they have taken an important first step in choosing a career.

Whether to attend college is one question. But what to study and where are important questions too. Lynne Cheney, Chairperson of the National Endowment for the Humanities, recently stated: "Colleges cost so much–it's sort of like buying a car without looking under the hood to pick a college without looking at the curriculum."

Programs of Study

"Maybe this is passing the buck, but I think my parents left my future (college-wise) pretty much up to me. A little more guidance or direction would've helped me to define a better future for myself–that is, in selecting a major." Clearly, this secretary, daughter of a chemical engineer, felt let down by her parents in planning for college. A dental assistant, feels the same way. What does she say can be done to help young people prepare for the future? Get "parents more involved in career exploration and college searching."

A program of studies or college major is an important consideration, and parents can help young people think it through. If a young person has a tentative idea or general occupational area in which he or she may want a career, then the information on education and training requirements in the *Occupational Outlook Handbook* will suggest appropriate programs of study. Start with the *Occupational Outlook Handbook*. That's the way to avoid the kind of frustration experienced by this young man who majored in theology and now works as a routeman for a newspaper: "Whenever I became interested in a possible career, I couldn't find out how to start."

It is possible, of course, that your son or daughter has not settled on a specific career objective and you are not able to work backward from a career objective to a program of study and preparation. In that case it makes sense to try to choose from general areas of study and possible college majors. The strategy is to try to find a career by sorting through courses of study–like Bill did in the previous chapter. Table 9:1 presents twelve program areas with examples of accompanying college majors that may suggest some career preparation possibilities.

Table 9:1. College Programs with Associated Majors

Program Area	Majors
Agriculture	Agronomy, Animal Husbandry, Fish, Wildlife Management, Forestry, Food, Science and Technology, Farm Management, Natural Resources Management
Business	Accounting, Business Management and Administration, Banking and Finance, Marketing and Purchasing, Insurance, Real Estate, Transportation and Public Utilities, Secretarial Studies
Communications	Journalism, Radio and Television Broadcasting, Advertising, Communication Media
Education	Elementary Education, Secondary Education, Special Education, Adult Education, Art Education, Industrial Arts, Library Science
Engineering	Chemical, Civil, Electrical, Mechanical, Industrial, Aeronautical, Petroleum
Fine/Applied Arts	Architecture, Art, Dance, Dramatic Arts, Music, Applied Design
Foreign Language	French, German, Spanish, Russian, Latin, Greek
Health Professions	Pre-dentistry, Dental Hygiene, Premedicine, Medical Technology, Nursing, Occupational Therapy, Physical Therapy, Radiology, Pharmacy
Home Economics	Clothing and Textiles, Family Relations, Child Development, Foods and Nutrition, Consumer Economics, Interior Design
Humanities	Creative Writing, History, Literature, Philosophy, Religion, Speech
Mathematics and Sciences	Mathematics, Statistics, Computer Sciences, Physical Biology, Chemistry, Physics Earth Sciences, Astronomy
Social Sciences	Law Enforcement, Corrections, Social Work, Geography, Pre-law, Psychology, Sociology, Anthropology, Archeology, Political Science

Fortunately, colleges do not require students to "declare a major" until the third year. That gives young people two years in college to try out and think about areas of study before they have to commit themselves. This is an excellent time for young people who don't know what they want to do to explore possibilities.

Deciding whether to go to college and what to study go hand in hand. Those are the two big questions a young person has to answer. One way to answer the questions is to think in terms of a career objective and how a program of study contributes to that goal. A second way is to think of more immediate courses of study that interest a young person and to use the college experience to explore and refine career interests. The son of a labor relations officer in a nuclear power plant offered this advice: "I would encourage those who intend to attend college not to be too sure initially about what course of study they wish to pursue. I found many courses in college to be extremely interesting where I had found them unchallenging or even boring in high school. A good general studies curriculum for the first two years would allow the majority of students to make a more enlightened decision on their eventual major."

Social Climate

Extracurricular activities and the social climate of the school are other factors to think about. A few colleges, only about 100 each, are single sex, for males or females only. These may not be good selections for the person who wants an active social life, though they may be an excellent choice for a person with other goals. Similarly, a young person with strong interests in hobbies, leisure time activities, and avocations might reasonably inquire whether these can be pursued at a particular college.

The mix of the student body–whether predominantly in-state, regional, or of national and foreign composition–bears on the social climate and life-styles at the school. That's another important factor to consider. A young lady who studied humanities for three years in college, then dropped out and now lives in Alaska, said her biggest problem since leaving high school was attending college. Why? "I was not prepared for the experience or able to cope adequately. Alternate life-styles should have been presented with equal emphasis. I didn't know had a choice."

Student services are another consideration. Is counseling available? Is there an employment service to help undergraduates find part-time jobs? Is there a job-placement service for graduates? Are there facilities and services for the handicapped? Does your son or daughter need remedial instruction in some area and does the college offer it? Are there fraternities and sororities? Does that matter? These are questions to ask and answer.

College Size

Colleges vary in size from fewer than a hundred to more than sixty-thousand students on a single campus. But college size means more than the number of people enrolled. Large enrollments often indicate:

Large undergraduate classes

More areas of specialized study

More course offerings in program areas

Larger and more specialized libraries and laboratories

Greater demands for student self-direction and self-sufficiency

Presence of graduate departments and advanced degree programs

A more research-oriented faculty

Similarly, small enrollments on college campuses may mean:

Less privacy and anonymity

More student faculty interaction

Faculty who are more teaching oriented

Better opportunities to participate in extracurricular activities

Smaller classes and more classroom discussion

A more personal atmosphere

Not all of these characteristics are always true, but they do tend to be associated with college size.

Distance and Location

Distance from home is another consideration. Number of miles means different things: how long it will take to get home; how much the trip will cost; how often it is feasible to return home; how much advanced planning is necessary; and what the transportation will be. Physical distance is one thing, but what that distance means to a young person is another matter. How far is 200 miles–psychologically? A long way? Not so far? For one young lady, a statistical clerk for a newspaper, going to college was quite an adjustment. What was her major problem since leaving high school? "Moving from home to school. Also adjusting to life in a fairly large city compared to the small community and farm life." A secretary for an investment firm said much the same. Her biggest problem was to "adjust to college life away from home."

Distance raises other questions. Is the college in another state? If so, is out-of-state tuition required? Out-of-state tuition and fees for students attending public four-year colleges can add another $1,500 - $2,000. Does your state have a reciprocity agreement with that other state that exempts your son or daughter from out-of-state tuition? You can find out by asking the college admissions officer.

It is wise to check college entrance standards to get some idea of the academic demands a young person can expect.

Distance may not affect tuition costs if the college is private. Private colleges usually charge a set tuition and may not distinguish between in-state and out-of-state tuition.

Distance may mean a difference in climate and scenery. Distant campuses may be snuggled in a mountain valley, conveninetly located next to the beach, crammed downtown in the inner city, or spread out on a midwestern plain. Weather and climate may differ. Ann Arbor gets cold and Miami gets hot. Seattle is wet and Phoenix is dry. Are these important considerations for your son or daughter?

Admissions and the Intellectual Environment

College admission policies translate into two practical considerations: whether a young person will be admitted and, if admitted, whether the level of classroom competition will be comfortable.

It is wise to check college entrance standards to get some idea of the academic demands a young person can expect. Straight A's in high school means acceptance at colleges that enroll the top ten percent of high school graduating classes, whereas grades of B and C are less likely to qualify. However, even straight A's do not assure admission in colleges with limited enrollments that may also consider achievements in extracurricular activities and personal recommendations.

But admission is only the first step. The intellectual environment of the college is the second. How does your son or daughter perform under pressure? Does he or she like intellectual challenges? How about competition? Too much pressure can be overwhelming, and too little may encourage coasting. Parents and young people will want to decide on the best fit between student and college characteristics. Students should consider their Scholastic Aptitude Test (SAT) scores when deciding whether to apply to college and, if so, to which college. It's a good indicator of how well they will fit with others at a particular college. Later in this chapter I will explain where to find the test scores of other students who enroll in the same colleges your son or daughter may be considering.

Accreditation

Colleges indicate their accreditation status in their printed materials. If they don't, it is wise to inquire further. Whether a college is accredited may make a difference when it comes to landing a job or transferring credits to another institution.

Accreditation is a seal of approval. Accreditation is to a college what an audit is to a business or what a credit rating is to an individual. It means that the college has met certain standards for its faculty, program of studies, and facilities. The standards are set by associations of schools and colleges in order to establish quality controls in education.

Six regional associations are the main accrediting agencies that give institutional accreditation to schools and colleges: Middle States Association; New England Association; North Central Association; Northwest Association; Southern Association; and Western Association. There are also national accrediting associations that accredit specific kinds of schools. Examples include the Association of Independent Colleges and Schools, the National Association of Trade and Technical Schools, and the American Association of Bible Colleges. There are others, but the regional accrediting associations are recognized most widely.

In the case of technical schools, it is wise to check whether the state's Department of Education approves the school. Be cautious if it does not. There are "fly by night" operators in education just as there are in any other business. *The College Blue Book* gives good advice when it says: "We urge our readers for their own peace of mind to check out institutions thoroughly through correspondence, phone calls, state bureaus, accrediting agencies, or on-site inspections."

Colleges jealously guard their accreditation. One way is by accepting grades, credits, and degrees earned at other accredited colleges, though possibly not accepting transfers at full value from nonaccredited schools. If you are considering a college that does not list its accreditation status, check with the college admissions office. Know what you are buying and what you are getting for your money. A degree or certificate from a nonaccredited school is normally not worth as much as a degree or certificate from an accredited school.

Specialized Accreditation. Institutional accreditation applies to the total college. That does not mean that all departments in a college are of equal quality. On the contrary, colleges may contain a mixture of strong, average, and weak programs.

Some forms of specialized accreditation are awarded to individual programs in colleges. Specialized accreditation assures that particular programs meet professional standards. These are most common in health-related programs.

Parents and young people thinking about studies in a particular area might consult the *Occupational Outlook Handbook* to determine whether graduation from an accredited program is a requirement for employment, then determine whether the college department they are considering has that specialized accreditation.

College Affiliation. Colleges may be public or private. If private, they may be private-independent or private-church-related. These designations say nothing about the quality of education in the institution. However, private-church-related institutions may have requirements that affect the campus environment and religious life of students on campus. These may take the form of compulsory attendance at worship services, requirements for religious courses, participation in service programs, and the like.

There is considerable variation in the campus life of private-church-related schools. The denominational influence may be strong or weak. Parents and young people will want to consider the match between their life-style preferences and the environment offered at both public and private colleges.

Information on Colleges: *The College Handbook*

There are about 3,100 accredited four-year and two-year colleges in the United States. In my judgment the best information on these appears in *The College Handbook*, published by The College Board. The College Board is a nonprofit organization that provides tests and educational services for students and membership colleges.

The College Handbook describes undergraduate institutions that are recognized by the U.S. Department of Education and are listed in the current Education Directory or Supplement that is published by the National Center for Education Statistics. The descriptions are based on detailed information supplied by colleges. The *Handbook* is updated every year.

Organization of the Handbook

The *Handbook* (1988-89 Edition) is a big and bulky volume, just under 2,000 pages of small print. But whatever it lacks in appearance, it more than compensates for in information breadth and depth. It is an encyclopedia of factual information on the nation's accredited colleges. It is the answer for young people who have complaints, like a practical nurse in Baltimore: "I was told by my parents and counselors I 'should go to college' because I was 'smart.' But no further aid or guidance was given. I did not know where to send for college catalogs, how to apply for financial aid, or when and where to apply for acceptance as a college student . . . I didn't ask because I felt it was expected of me to already know how to apply."

After a short introduction and index, the remaining pages are filled with important information about colleges (see Figure 9:1). The descriptions of colleges are about a half page. Large schools get more coverage than small schools because their programs are more extensive.

The college descriptions are grouped alphabetically by states. In the case of complex systems, such as state systems with branch campuses or satellite campuses, the college may be listed under special features as part of the general information following the system name. For example, the listing for Pennsylvania State University includes more than a page describing the main campus at University Park. In the general information section immediately following the system name, the description lists enrollments on twenty-two satellite campuses.

The College Handbook is a reference volume. It's not bedtime reading. It presents information in short descriptors rather than in elaborate narration.

Handbook Use

There are two ways to use *The College Handbook*. If you know the state in which a college is located, turn to the state and then locate the college in alphabetical order. If you know the name of the college but not the state in which it is located, start with the index in the back of the book which lists colleges alphabetically.

The descriptions for major colleges follow a standard outline that makes it easy to locate information and to compare information for one college with another: general information, curriculum, admissions, student life, annual expenses, financial aid, and address/telephone.

The *Handbook* contains an extensive glossary that identifies and defines abbreviations. Examples include Advanced Placement Program (APP), College-Level Examination Program (CLEP), and National Direct Student Loan Program (NDSL). The *Handbook* also provides information about the most common tests and programs. The introductory material includes useful information on choosing a college and annotates other books about college that may be useful.

General Information. This section identifies the college by its major characteristics: the number of years of undergraduate education it offers; the type of institution–whether, for example, community college, liberal arts, arts and sciences, conservatory, upper-division college, or university; whether the college is public, private, or proprietary; whether the college enrolls males, females, or both; whether the college has a religious affiliation; whether the college has **Accreditation** by its regional association; the number of males and females enrolled as **Undergraduates** and **Graduates**; the academic **Calendar** the institution follows; the general size and **Location** of the community in which the college is located; the **Campus environment** whether urban, suburban, or rural; **Special features** including locale, multicampus locations, and extensive evening courses.

Curriculum. The largest section in the description is a detailed statement on courses of study. The section divides into several smaller parts, beginning with listings of **Undergraduate degrees offered** and majors. Some colleges do not award degrees but list certificates or diplomas granted upon completion of program requirements. **Major fields of study** includes the broad areas in which undergraduates specialize. Colleges that offer both associate and bachelors degrees provide separate listings for the two degree programs.

Prospective enrollees can get additional information about the college's areas of interest and emphasis in the **Graduate programs** section, which lists broad areas of study rather than specific degree programs. Institutions that grant professional degrees–law, medicine or theology–list these under **First professional.**

Special academic programs include the following: accelerated program, cooperative education, double major, honors program, independent study, external degree, internship, student-designed major, study abroad, teacher preparation, 3-2 liberal arts and career combination, cross-registration, other special programs.

If **Special remedial services**–special counselors, learning center, preadmission summer program, tutoring, remedial instruction, and reduced course load–are available to help students improve their basic academic skills or provide instruction, these are listed. If a college provides air force, army, or navy ROTC training, these are designated under **Military training.**

Colleges list the tests used for **Placement or credit.** These indicate their policies on the use of selected national and local programs or tests to determine a student's placement in courses, use in counseling students on academic programs, or for granting college credit for experience or informal learning.

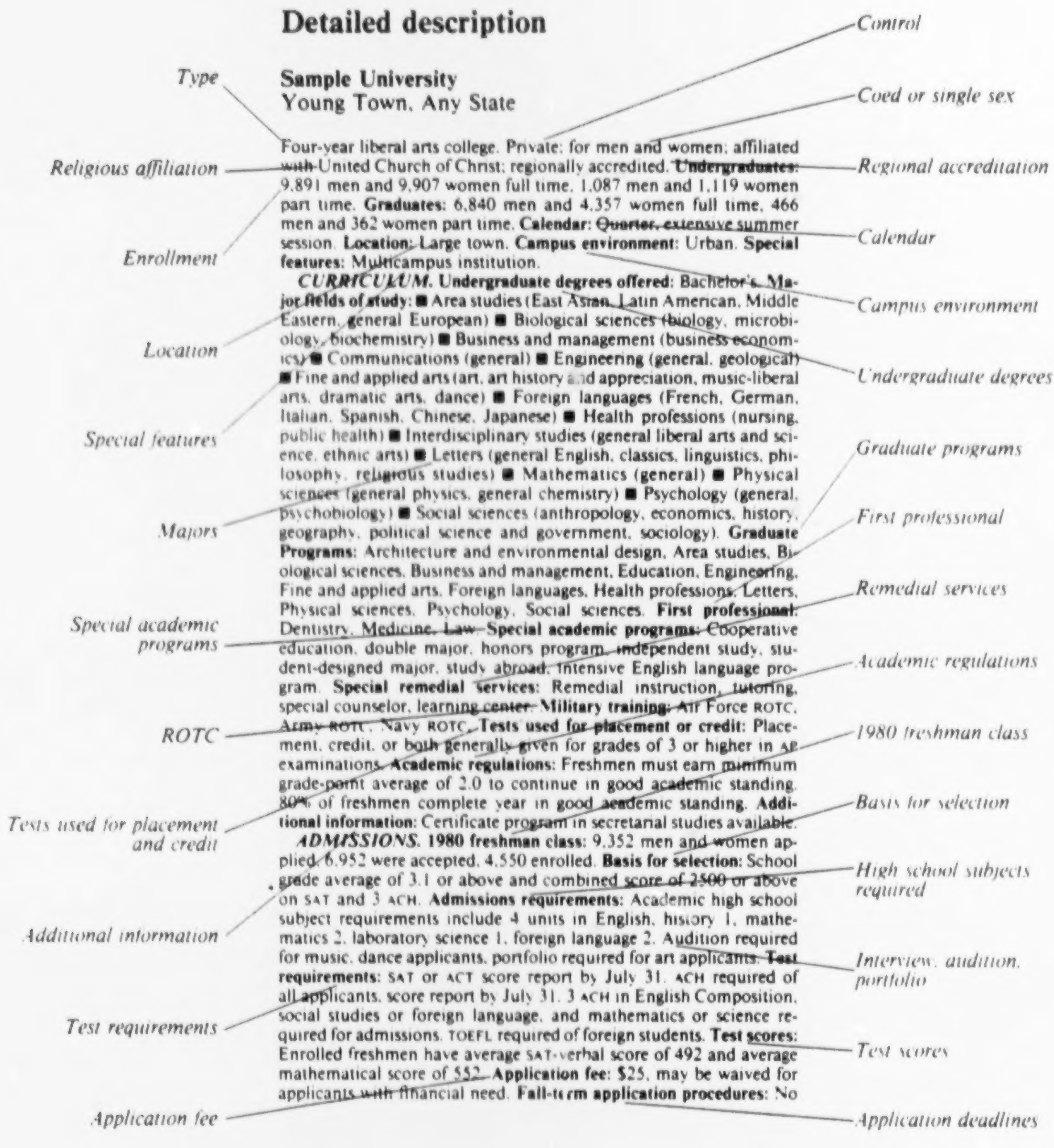
The **Academic regulations** section indicates the requirements freshmen must meet to maintain good academic standing. Many colleges also provide information about the percentage of students who maintain good academic standing after the first year and the percentage of freshmen who return for the sophomore year.

Colleges with unique features in their curriculums–for example, certificate and licensing programs–include these as **Additional information.**

Admissions. The admissions paragraph includes procedures for applying to the college and related information. The current **Freshman class** is described in terms of the number of men and women who applied, the number who were accepted, and the number that enrolled. This gives a rough indicator of an applicant's chances for acceptance.

The **Basis for selection** reports the college's admissions criteria by order of importance. Sometimes colleges report minimum qualifications required, such as rank in the top half of the applicant's high school class. Colleges indicate if special consideration is given to particular groups of applicants, such as children of alumni, foreign students, out-of-state applicants, minorities, and others.

Figure 9:1. Illustration of college descriptions in the College Handbook



Detailed description

Sample University
Young Town, Any State

Four-year liberal arts college. Private: for men and women; affiliated with United Church of Christ; regionally accredited. **Undergraduates:** 9,891 men and 9,907 women full time, 1,087 men and 1,119 women part time. **Graduates:** 6,840 men and 4,357 women full time, 466 men and 362 women part time. **Calendar:** Quarter, extensive summer session. **Location:** Large town. **Campus environment:** Urban. **Special features:** Multicampus institution.

CURRICULUM. **Undergraduate degrees offered:** Bachelor's. **Major fields of study:** ■ Area studies (East Asian, Latin American, Middle Eastern, general European) ■ Biological sciences (biology, microbiology, biochemistry) ■ Business and management (business economics) ■ Communications (general) ■ Engineering (general, geological) ■ Fine and applied arts (art, art history and appreciation, music-liberal arts, dramatic arts, dance) ■ Foreign languages (French, German, Italian, Spanish, Chinese, Japanese) ■ Health professions (nursing, public health) ■ Interdisciplinary studies (general liberal arts and science, ethnic arts) ■ Letters (general English, classics, linguistics, philosophy, religious studies) ■ Mathematics (general) ■ Physical sciences (general physics, general chemistry) ■ Psychology (general, psychobiology) ■ Social sciences (anthropology, economics, history, geography, political science and government, sociology). **Graduate Programs:** Architecture and environmental design, Area studies, Biological sciences, Business and management, Education, Engineering, Fine and applied arts, Foreign languages, Health professions, Letters, Physical sciences, Psychology, Social sciences. **First professional:** Dentistry, Medicine, Law. **Special academic programs:** Cooperative education, double major, honors program, independent study, student-designed major, study abroad, intensive English language program. **Special remedial services:** Remedial instruction, tutoring, special counselor, learning center. **Military training:** Air Force ROTC, Army ROTC, Navy ROTC. **Tests used for placement or credit:** Placement, credit, or both generally given for grades of 3 or higher in AP examinations. **Academic regulations:** Freshmen must earn minimum grade-point average of 2.0 to continue in good academic standing. 80% of freshmen complete year in good academic standing. **Additional information:** Certificate program in secretarial studies available.

ADMISSIONS. **1980 freshman class:** 9,352 men and women applied, 6,952 were accepted, 4,550 enrolled. **Basis for selection:** School grade average of 3.1 or above and combined score of 2500 or above on SAT and 3 ACH. **Admissions requirements:** Academic high school subject requirements include 4 units in English, history 1, mathematics 2, laboratory science 1, foreign language 2. Audition required for music, dance applicants, portfolio required for art applicants. **Test requirements:** SAT or ACT score report by July 31. ACH required of all applicants, score report by July 31. 3 ACH in English Composition, social studies or foreign language, and mathematics or science required for admissions. TOEFL required of foreign students. **Test scores:** Enrolled freshmen have average SAT-verbal score of 492 and average mathematical score of 552. **Application fee:** $25, may be waived for applicants with financial need. **Fall-term application procedures:** No

Type
Religious affiliation
Enrollment
Location
Special features
Majors
Special academic programs
ROTC
Tests used for placement and credit
Additional information
Test requirements
Application fee
Control
Coed or single sex
Regional accreditation
Calendar
Campus environment
Undergraduate degrees
Graduate programs
First professional
Remedial services
Academic regulations
1980 freshman class
Basis for selection
High school subjects required
Interview, audition, portfolio
Test scores
Application deadlines

closing date; priority given to applications received by November 30; applicants notified on a rolling basis. Early admission available. **Transfer applicants:** No closing date; priority given to applications received by November 30. High school and college transcripts required. Minimum 2.4 grade-point average required. Each student's record evaluated individually to determine number of transferable credits. Maximum of 105 quarter hours of transfer credit allowed toward bachelor's degree. Credit usually given for grades of 2.4 and higher in equivalent courses at approved institutions.

STUDENT LIFE. **1980 freshman class profile:** 41% from in state, 80% live in college housing, 2% live with family, 18% live in private housing. 25% have minority backgrounds, 8% foreign students. 84% of enrolled freshmen ranked in top 10% of high school class. **Programs undergraduates choose:** Arts and sciences 56%, engineering 44%. **Postgraduate studies:** 60% of graduates enter graduate or professional programs. **Housing:** Dormitories (coed); married student, fraternity, sorority, cooperative housing available. **Student activities:** Student government, student newspaper, magazine, yearbook, radio, drama, choral groups, dance, symphony orchestra, marching band, music ensembles, fraternities, sororities. **Athletics:** Archery, badminton, baseball, basketball, bowling, cross-country, fencing, football, golf, gymnastics, handball, racquetball, rifle, rowing (crew), swimming, tennis, track and field. **Student services:** Personal counseling, health services, employment service for undergraduates, placement service for graduates, foreign student adviser. **Additional information:** Freshmen not allowed cars on campus.

ANNUAL EXPENSES. **Tuition and fees:** $3,880. **Room and board:** $2,000. **Books and supplies:** $279. **Other expenses:** $765.

FINANCIAL AID. **Need-based aid:** 2,750 accepted freshman applicants were judged to have need; 2,750 of these were offered aid. 2,600 of these were offered the full amounts needed. **Total aid distributed:** Grants 47%, loans 14%, jobs 39%. **Basis for selection:** 89% of grants based on need, 1% based on need and other criteria, 10% not based on need; all loans based on need; 2% of jobs based on need, 98% not based on need. Limited scholarships based on school grade average and test scores. **Application procedures:** No closing date; priority given to applications received by February 12; applicants notified on a rolling basis beginning on or about March 1; must reply within 3 weeks. **Transfer students:** Closing date February 12.

ADDRESS/TELEPHONE. Admissions Office, Sample University, Young Town, Any State (212) 335-6000. ●

Brief description

Small University
New Town, Any State

Four-year; public; for men and women; 4,231 undergraduates. Zip code 36894.

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CRDA, EDP, deferred and early admissions
Transfer applications
Percent in college housing
Percent minorities
High school rank
Percent of graduates continuing education
Athletics
Student services
Room and board
Tuition
Books and supplies
Transfer students
Aid application deadlines
Type
Control

Percent state residents
Percent foreign students
Programs undergraduates choose
Housing
Student activities
Additional information
Personal expenses
Percent of aid in grants, loans, jobs
Basis for selection
Freshmen offered need-based aid
College Board member
Where to write or call
Enrollment
Coed or single sex

Private schools sometimes include experiential criteria. For example, Trinity Bible Institute includes "evidence of sound moral character and Christian conversion through born-again experience most important" as a basis for selection.

"Open admissions" means the college usually accepts applicants regardless of past academic records and qualifications. However, the same colleges may use selective admissions criteria that apply to particular programs, such as allied health sciences, or to certain groups of students, such as out-of-state applicants.

Colleges indicate what they require by way of academic background, test scores, interview information, and the like in their statement on **Admissions requirements.** If colleges require national, standardized admissions tests, such as ACT or SAT, the name of the test and the date by which scores must be reported are indicated in **Test requirements.**

Colleges that require admissions tests may report the **Test scores** of their applicants, accepted applicants, and enrolled freshmen. This information is useful for comparing scores to determine what an applicant's relative class rank is likely to be if enrolled. **Application fees** are listed if required.

Fall-term application procedures include deadlines and special admission procedures such as Early Decision Plans (EDP) or Candidate Reply Date Agreements (CRDA). These procedures are defined in the *Handbook* glossary. Colleges that follow deferred admission programs permit students to postpone enrollment for one year after being accepted. Colleges that follow early admission programs permit qualified high school students to enroll on a full-time basis before high school graduation.

Colleges list requirements for **Transfer applicants** if the procedures differ from those for applicants who apply directly from high schools. Colleges provide **Additional information** if there are special provisions for certain groups. For example, there may be special policies that apply to adults over twenty-five years old and part-time students.

Student Life. This section reports information on students, the programs they choose, student activities, and services.

The **Freshman class profile** describes characteristics of the most recent freshman class: What percentage of freshman are state residents? What percentage live in college-affiliated housing? What percentage live with family? What percentage live in private housing? What percentage commute from home or private housing? What percentage have minority backgrounds? What percentage are foreign nationals? The college may also describe the freshman class in terms of how its members ranked in their high school classes.

Programs undergraduates choose reports the percentage of undergraduates who major in various general fields. **Postgraduate studies** indicates the percentage of students who continue their education upon completion of a bachelor's degree. **Housing** lists the kinds of residential accommodations available including whether dormitories are coed, whether married student and cooperative housing is available, and whether the campus offers fraternity and sorority housing.

Student activities and **Athletics** list the range of activities and sports available at the college. Colleges report both intramural and intercollegiate sports. For example, the University of Wisconsin–Madison lists seventeen intercollegiate and twenty-two intramural programs in athletics.

Student services provided may include personal and career counseling, health services, employment service for undergraduates, placement service for graduates, facilities and services for the handicapped, veterans, and others.

The student life section concludes with provision for **Additional information** about special features or policies that affect student life. For example, the college may list its policy regarding freshman use of cars on campus.

Annual Expenses. This is a brief statement of the average costs of full-time freshmen for the current academic year.

Tuition and fees may be listed separately or combined with **Room and board** and quoted as a comprehensive fee. If out-of-state fees are assessed to nonresidents, the added amount is indicated. The costs for **Books and supplies** and other expenses are reported separately. **Other expenses** refers to normal costs for clothing, laundry, entertainment, medical insurance, and furnishings but does not include transportation costs.

Financial Aid. This section gives practical information, appropriate procedures for making application, and information about how the college awards financial aid. **Need-based aid** reports how many accepted freshmen were judged to have need and how many were offered aid. Undergraduate aid includes grants, loans, and jobs, and most colleges indicate the percentages of **Total aid distributed** in these forms.

The **Basis for selection** reviews the percentages of grants, loans, and jobs that are based only on need, on some combination of need and other criteria, and on criteria other than need. Colleges may also list the criteria other than need (for example, academic achievement, talent, and athletic ability) that are used as a basis for financial aid decisions.

Most financial aid programs require completion of a need analysis document to determine the extent of financial need. **Application procedures** specify the general requirements–including forms to use and schedules to follow–which vary considerably across colleges.

Colleges may require state-specific forms in addition to national forms. In these cases the state form may be the only document required of state residents, while the national form may be required for out-of-state applicants. It is wise to verify which document a college requires. In addition to the requirements listed, most colleges require application for a Pell Grant and for state aid as a prerequisite for receiving consideration for institutional aid.

If aid policies differ for **Transfer students**, the differences are noted.

Address/Telephone. The last item in each college description gives the mailing address and telephone number for the college office that you may use to get further information.

Information on Business, Trade, and Technical Schools: *The College Blue Book*

Career preparation programs are growing and changing rapidly. Indeed, there are about three times as many business, trade, and technical schools as there are two- and four-year colleges, and they are in popular demand. Increasing numbers of high school graduates, like a young lady who received a certificate in visual arts from a technical school in Minneapolis, feel as she does: "Although a college degree is important to some careers, it is not mandatory for success." A young man making a career of the navy agrees: "I believe technical skills should be given more emphasis as a satisfying way of life. Today it's the blue-collar workers who are making the most money and I think, on the whole, they are more satisfied with their jobs."

Career preparation programs and institutions are not well organized into recognized fields of study and course offerings, however. This contributes to the problem of sorting out the options. In my judgment the best current resource for assisting the process is *The College Blue Book: Occupational Education*, published by Macmillan. I refer to the twenty-first edition of *The Blue Book* in the sections that follow.

The College Blue Book provides information on more than nine thousand business, trade, and technical schools. It includes two-year colleges that offer vocational preparation programs. Many of the listings are for private technical schools. Some start at the eleventh or twelfth grade of high school, though the majority are postsecondary. *The Blue Book* is a good resource for people like a young lady in Idaho who held seven different jobs in twelve years and feels herself "drifting": "Had I been directed toward vocational school, my life may be different today," she told us. "I wouldn't be drifting jobwise." It is also a good resource for young people who, like a physics major now working as a product researcher for a manufacturing company, wants to "be exposed to the great diversity of jobs, trades, and opportunities in the real world such as house builder, entrepreneur, and business executive."

The Blue Book reports information from numerous sources including schools, state licensing bureaus, national professional organizations, and accrediting agencies. The amount of information and its reliability varies by school. *The Blue Book* is more than a thousand pages long, although the nine thousand descriptions appear in the first five hundred pages. The average description is modest, only about a hundred words long (see Figure 9:2).

There are no regional accrediting associations for business, trade, and technical schools that correspond to the six regional college associations. However, there are several accrediting associations. *The Blue Book* lists schools or programs accredited by twenty-eight different accrediting associations.

Organization of The College Blue Book

The Blue Book is organized in two major sections. The first gives descriptions of business, trade, and technical schools by state. The second section indexes more than a thousand curricula and programs of instruction and lists schools that offer them.

The descriptive information on schools appears in alphabetical order by states. Each state section begins with a general introduction that first lists the contact persons and addresses for the state vocational education offices. The information on state education officers is followed by "state regulatory information." The regulatory information varies from a few lines to more than a page and explains the legal requirements that govern schools in the state.

The Blue Book presents information on ten types of schools: Allied Medical, Art, Barber, Business, Correspondence, Cosmetology, Flight and Ground, Nursing, Trade and Technical, and Two-Year College.

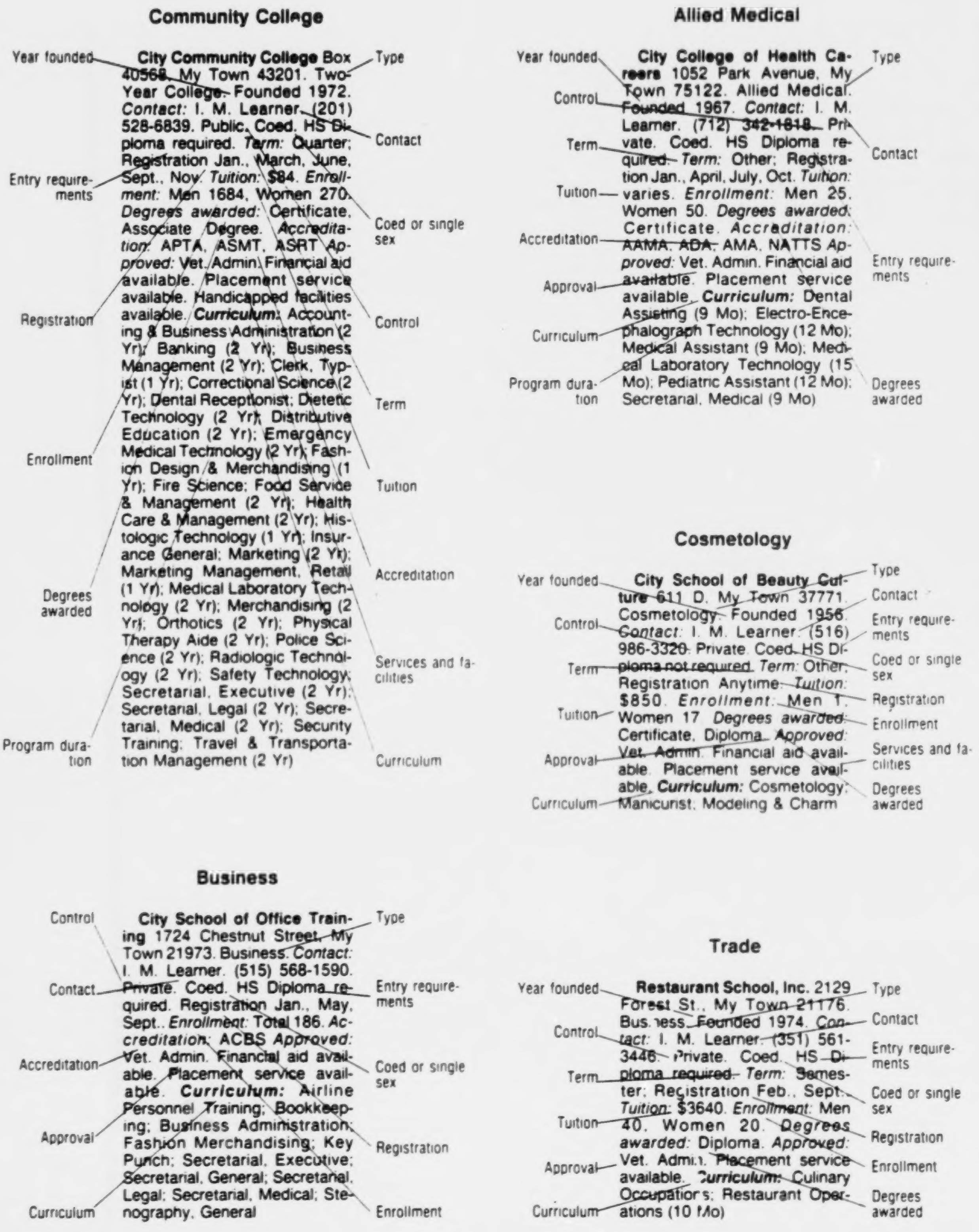
General Information. Following the state regulatory information, *The Blue Book* lists cities and towns alphabetically, under which it lists schools alphabetically.

After giving the school name and address, *The Blue Book* identifies the type of school. A community college is an example of a two-year college whereas a restaurant school is an example of a trade school. The year the school was Founded is usually listed too.

Contact gives the name and telephone number of the school official to call, write to, or talk to for more information, whether the information relates to entry requirements, financial aid, or curriculum–anything having to do with the school. Control of the school, whether it is public or private, follows as does information on whether the school is coeducational or single sex.

Entry requirements are usually listed. These vary but usually specify whether or not the school requires a high school diploma. *Term* indicates whether the school operates on a semester, quarter, or some other basis; and registration identifies the months during which new enrollments are processed and programs begin. This may vary from once a year to several times a year, or "anytime" as is usually the case with flight and ground schools. If the school lists the *Tuition* fee, that follows next. Sometimes tuition "varies," other times it is "none."

Figure 9:2. Illustration of school descriptions in the College Blue Book



Community College

City Community College Box 40568. My Town 43201. Two-Year College. Founded 1972. *Contact:* I. M. Learner. (201) 528-6839. Public. Coed. HS Diploma required. *Term:* Quarter; Registration Jan., March, June, Sept., Nov. *Tuition:* $84. *Enrollment:* Men 1684, Women 270. *Degrees awarded:* Certificate, Associate Degree. *Accreditation:* APTA, ASMT, ASRT *Approved:* Vet. Admin. Financial aid available. Placement service available. Handicapped facilities available. ***Curriculum:*** Accounting & Business Administration (2 Yr); Banking (2 Yr); Business Management (2 Yr); Clerk, Typist (1 Yr); Correctional Science (2 Yr); Dental Receptionist; Dietetic Technology (2 Yr); Distributive Education (2 Yr); Emergency Medical Technology (2 Yr); Fashion Design & Merchandising (1 Yr); Fire Science; Food Service & Management (2 Yr); Health Care & Management (2 Yr); Histologic Technology (1 Yr); Insurance General; Marketing (2 Yr); Marketing Management, Retail (1 Yr); Medical Laboratory Technology (2 Yr); Merchandising (2 Yr); Orthotics (2 Yr); Physical Therapy Aide (2 Yr); Police Science (2 Yr); Radiologic Technology (2 Yr); Safety Technology; Secretarial, Executive (2 Yr); Secretarial, Legal (2 Yr); Secretarial, Medical (2 Yr); Security Training; Travel & Transportation Management (2 Yr)

Year founded
Entry requirements
Registration
Enrollment
Degrees awarded
Program duration
Type
Contact
Coed or single sex
Control
Term
Tuition
Accreditation
Services and facilities
Curriculum

Business

City School of Office Training 1724 Chestnut Street, My Town 21973. Business. *Contact:* I. M. Learner. (515) 568-1590. Private. Coed. HS Diploma required. Registration Jan., May, Sept.. *Enrollment:* Total 186. *Accreditation:* ACBS *Approved:* Vet. Admin. Financial aid available. Placement service available. ***Curriculum:*** Airline Personnel Training; Bookkeeping; Business Administration; Fashion Merchandising; Key Punch; Secretarial, Executive; Secretarial, General; Secretarial, Legal; Secretarial, Medical; Stenography, General

Control
Contact
Accreditation
Approval
Curriculum
Type
Entry requirements
Coed or single sex
Registration
Enrollment

Allied Medical

City College of Health Careers 1052 Park Avenue, My Town 75122. Allied Medical. Founded 1967. *Contact:* I. M. Learner. (712) 342-1818. Private. Coed. HS Diploma required. *Term:* Other; Registration Jan., April, July, Oct. *Tuition:* varies. *Enrollment:* Men 25. Women 50. *Degrees awarded:* Certificate. *Accreditation:* AAMA, ADA, AMA, NATTS *Approved:* Vet. Admin. Financial aid available. Placement service available. ***Curriculum:*** Dental Assisting (9 Mo); Electro-Encephalograph Technology (12 Mo); Medical Assistant (9 Mo); Medical Laboratory Technology (15 Mo); Pediatric Assistant (12 Mo); Secretarial, Medical (9 Mo)

Year founded
Control
Term
Tuition
Accreditation
Approval
Curriculum
Program duration
Type
Contact
Entry requirements
Degrees awarded

Cosmetology

City School of Beauty Culture 611 D. My Town 37771. Cosmetology. Founded 1956. *Contact:* I. M. Learner. (516) 986-3320. Private. Coed. HS Diploma not required. *Term:* Other; Registration Anytime. *Tuition:* $850. *Enrollment:* Men 1. Women 17 *Degrees awarded:* Certificate, Diploma. *Approved:* Vet. Admin. Financial aid available. Placement service available. ***Curriculum:*** Cosmetology; Manicurist; Modeling & Charm

Year founded
Control
Term
Tuition
Approval
Curriculum
Type
Contact
Entry requirements
Coed or single sex
Registration
Enrollment
Services and facilities
Degrees awarded

Trade

Restaurant School, Inc. 2129 Forest St., My Town 21176. Business. Founded 1974. *Contact:* I. M. Learner. (351) 561-3446. Private. Coed. HS Diploma required. *Term:* Semester; Registration Feb., Sept.. *Tuition:* $3640. *Enrollment:* Men 40. Women 20. *Degrees awarded:* Diploma. *Approved:* Vet. Admin. Placement service available. ***Curriculum:*** Culinary Occupations; Restaurant Operations (10 Mo)

Year founded
Control
Term
Tuition
Approval
Curriculum
Type
Contact
Entry requirements
Coed or single sex
Registration
Enrollment
Degrees awarded

Enrollment reports the number of students enrolled and may report the figures separately for men and women. Schools usually, but not always, report the *Degrees awarded* which, as in the case of community colleges, may include associate degrees and certificates and, in the trade school example, includes only diplomas. Certificate refers to successful completion of a program of less than one year duration; diploma refers to successful completion of a program of more than one year, but less than two years' duration; and associate degrees refer to successful completion of two-year programs, usually at a junior or community college.

Schools may list *Accreditation*, which is usually abbreviated. *The Blue Book* defines the abbreviations in the Introduction. For example, AAMA, which may be reported for an allied medical school, refers to the American Association of Medical Assistants. Accreditation means that a school has met the standards set by a paraprofessional association.

Approved means that the school program is recognized by the approving agency, usually the Veterans Administration, and that applicants may qualify for veterans' educational benefits. Services and facilities may be listed. These include financial aid, placement services, and handicapped facilities, as in the community college example.

Curriculum is often the largest component in the description. There is much variation in the number and kinds of programs offered, as evident in the examples. If the information is given, *The Blue Book* designates the program duration in terms of weeks, months, quarters, or years.

Business, trade, and technical schools often change rapidly. The number that exist may vary considerably from year to year. For example, the number of schools listed in *The Blue Book* during the mid-1970s was nearly 13,000, nearly half again as many as the number in the current edition. There may be other changes, schools closing or opening, within the total number. The schools that continue from year to year may change programs such that, apart from the name, they may have little in common from one year to the next. Because business, trade, and technical schools change rapidly, it is important to base decisions on the most current information received directly from the school.

Curricula and Programs of Instruction. The second half of *The College Blue Book* lists schools by curricula and programs of instruction. *The Blue Book* alphabetically lists more than a thousand curricula and programs of instruction, lists states alphabetically under programs, lists cities alphabetically within states, and lists schools alphabetically within cities.

Take computer programming as an example. Under the program name, states are listed alphabetically. Thus, one might find Alabama, Alaska, and Arizona. After each state *The Blue Book* lists the cities where computer programming instruction appears. Under Arizona programs may be listed only for Phoenix, Tucson and Yuma. Finally, the business, trade, and technical schools that offer computer programming are also listed alphabetically under the name of the city. The index of curricula and programs of instruction is an easy way to find the names and locations of schools that teach particular technical skills.

SAT/ACT–College Admissions Tests

The two most frequently used, nationwide college-admissions tests in the United States are the Scholastic Aptitude Test (SAT) and the American College Testing Program's Assessment (ACT). The SAT or ACT is normally required by two- and four-year colleges but seldom by business, trade, and technical schools. Few colleges base their admissions decisions solely on SAT or ACT scores. Most also consider such other information as high school grade-point-average, extracurricular activities, and special talents. Many colleges use admissions test scores to identify students for advanced placement or remedial courses.

The College Handbook indicates the basis on which each college makes its admissions decisions; therefore, it is wise to check the admissions section in the description for each college that is considered. One of the things prospective applicants are sure to find is whether they must take the SAT or the ACT.

About a million high school seniors take each test each year. Colleges in the Midwest, South, and some in the West generally require the ACT, probably because the American College Testing Program is located in Iowa City, Iowa. Colleges on the East Coast and some on the West Coast require the SAT, probably because the SAT is administered by The College Board in Princeton, New Jersey. Some colleges will accept either the SAT or the ACT.

In a later chapter I provide a timetable for parents and young people to follow that alerts them to when they should be concerned about taking college admissions tests, applying to colleges, applying for financial aid, and the like.

SAT

The College Board makes available booklets that describe the SAT test, give specific instructions for completing the necessary forms, provide testing tips and sample test questions. The booklets are generally available in high school counseling centers.

The SAT test score report is mailed to the student's home about six weeks after the test. The report lists separate scores for the verbal and math sections of the SAT.

Scores for the SAT sections range from 200 to 800. Two-thirds of college-bound students score between 320 and 525 on the verbal section, and between 355 and 585 on the math section. The SAT score report enables parents and their son or daughter to compare their scores with college-bound seniors in the current high school graduating class across the nation and recently enrolled freshmen in colleges that the student named to receive the scores. This information gives the prospective applicant an indication of the general academic level of entering freshmen classes at these colleges.

The report makes comparisons by using percentile ranks that indicate the percentage of people who earned scores lower than the student. The College Board provides information with the SAT test report that helps parents and students interpret the scores.

SAT Achievement Tests. A college may also require one or more SAT Achievement Tests for admission or placement purposes. Achievement tests are one-hour, multiple-choice, and measure a student's knowledge of a particular subject. SAT offers Achievement Tests in fourteen areas. *The College Handbook* may indicate if particular achievement tests are required by specific colleges; but it is wise to discuss details and arrangements directly with high school counselors or, if necessary, with the college admissions office. Registration for the SAT or ACT must be completed about a month in advance, so it is wise to note the registration dates.

Test registration packets are available in high school counseling centers, and many high schools notify parents and students when the packets are available. The packets provide specific information about testing dates, registration deadlines, and testing fees for the SAT and ACT. The SAT and ACT may be given more than once between September and June, usually on a Saturday morning. The deadlines for submitting registration forms and test fees are rigid and, therefore, must be observed.

ACT

The American College Testing Program provides booklets that describe the ACT, give examples of test questions and answers, and provide helpful suggestions about taking the ACT. This information is generally available in high school counseling centers.

The ACT test score report is mailed to the student's high school about four weeks after the test. The ACT report lists five scores: English, math, social studies, natural sciences, and a composite, which is the average of the four other scores. Two-thirds of all college-bound students earn composite scores between 12 and 24 on a scale that ranges from 1 to 36. The report enables parents and students to compare their scores with college-bound students who took the ACT in their high school, college-bound students in their state, college-bound students from across the nation, and recently enrolled freshmen in one or more colleges that the student named to receive the scores. This information gives the prospective applicant an indication of the general academic level of entering freshmen classes at these colleges.

The ACT score report makes comparisons using percentile ranks that indicate the percentage of people who earned scores lower than the student. The report also includes summary biographical and educational information about the student and interest inventory information that enables students to compare their interests with the interests of people in various college majors or employed in different occupational groups. The American College Testing Program provides information that helps parents and students interpret the results of the test. This information is included with the ACT score report that is sent to the student's high school.

Special Preparation and Retaking the Test

Both the SAT and the ACT measure abilities and knowledge that students acquire over a period of years. Short-term drills and intense cramming sessions are not likely to increase scores, though practice on sample test questions may familiarize students with the form of the tests and the different types of questions. This may help reduce test anxiety, especially for young people who tend to get "up tight" about taking tests.

The results of longer term preparation courses vary from program to program and from student to student. Some studies of special preparation programs in high schools indicate that the courses tend to raise scores 10 to 15 points on the SAT. In most cases, an increase this small is not likely to make a difference in admission to a particular college.

What about retaking the test? Studies show that young people who retake the test only because they scored low on an earlier test are not likely to greatly increase their scores by retaking the test. About two-thirds raise their scores a few points, and about one-third lower their scores. However, occasionally something happens while a student takes a test that may negatively affect the score. Good reasons for retaking a test include illness, high anxiety levels, or misunderstanding instructions.

When considering either special preparation courses or retaking the test, weigh the time and money required against the likelihood that it will favorably affect a college admissions decision.

Ten

College Costs and Financial Aid

My father went to college in the late 1920s. He was fond of relating how he worked for a county road maintenance department in rural Iowa and finished one summer with savings of $104 in his pocket. His room, board, and tuition costs for the following year were $102.

Things changed by the time I went to college in the late 1950s. Unlike my father, I never earned more money from summer employment than the costs for my tuition, room, and board for the following year. I made up the difference with scholarships and by working during the school year. Working always involved a tradeoff because scholarships were based primarily on achievement and merit. I didn't want my grades to slip because of work, yet the scholarship situation was always "iffy," and that left me little choice but to work. It was an uneasy compromise.

Today, most awards are based on need. Very few students earn enough money working during the summer months to cover their costs for an academic year. Most students apply for financial aid, and, in one form or another, many receive it.

In this chapter I overview what parents should know about college costs and financial aid programs. I review ways to increase resources and reduce costs, then briefly discuss parents' continuing influence on their young people through the college years. I close Part 3 with a timetable for parents and young people to follow for making college plans and with suggestions for what parents can do to assist their sons' and daughters' career decisions.

Estimating Costs and Resources

There is bad news and good news when it comes to paying for a college education. There is also ambiguous news. In this section I identify the bad, the good, and the ambiguous as it relates to meeting college costs.

College Costs

The bad news is that the costs of college education have increased steadily in recent years, faster than the cost of inflation. Many young people feel like the young lady who dropped out of college after one year and told us that young people's biggest need is "advice on financial assistance for those who wish to attend college but feel financially unable to do so."

Table 10:1 gives the national averages of costs for resident students at four kinds of colleges for the 1988-89 academic year. Of course, some colleges have lower and others have higher costs. For example, 1988-89 expenses at Stanford University are estimated at $19,556 plus transportation per year.

Over the next few years college costs are likely to continue to rise 7 to 9 percent per year while the Consumer Price Index, a common measure of inflation, may increase only 5 percent. The huge increases occur, in part, from earlier efforts to keep costs down during the double-digit inflation days of the late 1970s. Eventually the piper had to be paid in the form of overdue building maintenance, library books, laboratory equipment, and faculty and staff salaries. The result is that today's college costs outstrip inflation, and that's a concern for anyone who has to pay the bill.

There is also good news. The amount of money available for student aid has increased substantially–indeed, monumentally! In 1958, thirty years ago, the federal government initiated student aid with a $40.3 million program. Over the years student-aid from all sources has increased 379-fold to about $16 billion per year.

That amount has been relatively constant in recent years which means that it has to stretch further because college costs continue to rise, inflation erodes the buying power of the dollar, and more young people are competing for the same amount of financial aid.

So much for the bad news and the good news. The ambiguous news is that federal aid programs change from time to time, even from year to year, in ways that are not altogether predictable. Parents need to follow the developments on the financial aid scene as these occur, and I'll

Table 10:1. Average Costs for Resident Students, 1988-89

Item	2-year public	2-year private	4-year public	4-year private
Tuition and fees	$ 842	$4,713	$1,694	$8,737
(Out State Tuition)	($1,992)	($2,684)		
Books and supplies	438	424	454	459
Room and board		3,258	3,039	3,898
Personal expenses		832	1,042	818
Transportation	423	442	414	
Total	$3,868	$6,609	$4,721	$8,440

explain how to do that. However, it is also useful to keep in mind the history of financial aid when contemplating where the program is likely to go in the future.

Brief History of Financial Aid

Beginning with the GI Bill after World War II and the post-Sputnik National Defense Education Act signed by Eisenhower in 1958, programs of financial aid for students in postsecondary education enjoyed more than two decades of remarkable growth, and there was an era of unprecedented access to higher education. Congress expanded financial aid programs with passage of the Higher Education Act in 1965. As part of Kennedy's New Frontier legacy and Johnson's Great Society program, the Higher Education Act emphasized several forms of aid for low-income students: Educational Opportunity Grants; federally insured student loans; work study programs; and social security funds underwriting the cost of a college education for children of deceased, disabled, or retired workers.

In 1972 Congress added a matching-funds program to induce states to establish their own financial aid programs. In 1978 the Middle-Income Student Assistance Act permitted more families to receive some forms of aid.

It is highly unlikely that all federal financial aid will suddenly disappear. History suggests that when it acts, the federal government adjusts, refines, realigns, relabels, and changes priorities, but it would be out of character for the federal government to chop an entire program with one fell swoop.

But the 1980s ushered in a period of uncertainty regarding the future of federal financial aid programs. Several factors contributed to the change. The prolonged economic recession early in the decade left students caught between rising educational costs and a tightening supply of money available for financial aid programs. In the face of difficult budgetary decisions, the consensus regarding the principles underlying financial aid programs began to weaken. A new ideology broadened the question from "Can we maintain these programs?" to "Should we maintain them?" In this climate it was probably inevitable that financial aid would, for the first time, become a highly politicized issue. What for a quarter of a century was a virtually protected area suddenly became the topic of heated debate and political tradeoffs, often with little regard for academic calendars and individuals' attempts to make rational academic plans.

That's where the matter of federal financial aid continues to be. It's politicized. It's under debate. The future of financial aid programs is uncertain, and it is likely to remain that way, perhaps changing year by year with the possible exception of election years when it may be convenient to rest the issue. Meanwhile, a foreman for an auto repair service in Tacoma, Washington, spoke for a lot of young people when he said: "The biggest problem I've encountered is...no money to be able to go to college."

The issue facing parents is how to plan to meet college costs under uncertain conditions. Four of five people who participated in a national public opinion poll said that college costs are rising so fast that they will be out of reach in the near future. Seven out of ten said that right now they would not be able to pay for college without a grant or loan. It isn't just parents who are concerned. About half of today's college students report that lack of money is a problem for them.

Principles of Financial Aid

The financial aid picture is unsettled and unsettling, but there are some guidelines for parents to follow. Close observers suggest that there will be less public money for financing education in the future, and the money will be more difficult to obtain. Eligibility rules for grants and loans are likely to tighten up, and the government has cracked down on former students whose loan payments are in arrears. I expect that future programs will favor the self-help concept, such as college work-study, and there may be a tax incentive for families to contribute to savings accounts for their children's college education, perhaps modeled after IRA accounts.

Both the self-help and savings emphases are consistent with current Administration philosophy, which suggests that an affordable education will require that parents and their young people do more careful planning and perhaps make some difficult choices.

But it is highly unlikely that all federal financial aid will suddenly disappear. History suggests that when it acts, the federal government adjusts, refines, realigns, relabels, and changes priorities, but it would be out of character for the federal government to chop an entire program with one fell swoop. Moreover, the continuing concern for quality of education generated by "A Nation Is At Risk," the 1983 report of the National Commission on Excellence in Education, most likely will dampen prospects for budget cuts earmarked for education, in whatever the form. A wide range of postsecondary options will probably continue to be affordable for qualified and motivated students.

Family Responsibility. In whatever manner specific programs may be adjusted, it seems clear that certain basic principles of financial aid will continue. First among these is the principle that the family, together with the student, bears primary responsibility for meeting postsecondary education costs. This is not a change of philosophy or policy. Rather, this has been the basic principle undergirding the federal financial aid program from the beginning. Although the principle might have suffered some erosion in recent years, it remains a workable way to provide the greatest benefit to the largest number of people, a goal that is at the heart of our democratic process.

A family's ability to pay is determined by a fair, reasonable, and uniform analysis of means. That is the reasoning behind family need analysis statements, which produce estimates of need based on carefully defined rules for estimating resources and estimating costs.

Estimated Need. The second principle is that financial aid is intended to meet estimated need. Estimated need is the difference between what the formulas indicate the family and student can pay and the actual costs of attending a particular institution. This principle too has suffered some erosion in recent years as some colleges have introduced "no-need" scholarships as a way of attracting students. However, no-need scholarships are few in number and usually small in size–often less than $500–relative to total college costs. "Full scholarships" independent of need are about as common as a "free lunch". They seldom exist.

The Package Concept. The third continuing principle in financial aid is the package concept. The total aid given any student consists of a combination of "gift aid" (scholarships and grants that need not be repaid) and "self-help aid" (loans or work that involve obligations on the part of the student). The principle is that of fairness to the student, so that some don't receive all gift while others are burdened with intolerable loans, coupled with the effort to distribute available funds to achieve the most widespread benefit.

Amounts, regulations, forms, and deadlines may shift from year to year, but I suggest that the basic financial aid system is here to stay. Given this background, there are some practical steps parents and young people can take to meet college costs.

Practical Steps to Take

In his book, Cost of Children, Dr. Lawrence Olson estimates that families earning $42,000 a year at the time a child is born will spend $323,000 to raise a son to age twenty-two, and $21,000 more if the child is a daughter. Olson's figures include tuition at private colleges, which may put his third of a million dollar estimate a bit on the high side. Nonetheless, the costs of raising children are substantial. One way to partially reduce that expense is to qualify for financial aid.

Apply. Young people can't get financial aid if they don't apply for it. This may seem obvious, but every year many families automatically rule themselves out without good reason. Some think that applying for enrollment and applying for financial aid are one and the same, but not so. There are two separate procedures involved including different forms and different deadlines. Other parents and students have heard that financial aid funds have been radically reduced. Those reports may or may not be true. Recently, an unfounded rumor lead to a 5 to 10 percent decline in applications and a lot of confusion that wasn't clarified until the College Board and a $15,000 grant from the Ford Foundation produced a public service announcement for airing over a thousand radio stations. The announcement was designed to correct the mistaken impression that financial aid was no longer readily available.

About two-thirds of freshmen who apply for a Pell grant qualify, and four-fifths who apply for a Stafford Loan (formerly known as Guaranteed Student Loans) qualify.

Still others think that there is no reason to apply for financial aid because they won't get anything anyway. The fact is that there are families with incomes of $60,000 that qualify for need-based aid because of their particular circumstances. More than half of high school seniors who want to go on to college or vocational preparation apply for financial aid. The effort and expense required to apply are minimal, considering the possible return. About two-thirds of freshmen who apply for a Pell grant qualify, and four-fifths who apply for a Stafford Loan (formerly known as Guaranteed Student Loans) qualify. Sixteen percent of undergraduates have Pell grants and 25 percent have Stafford Student Loans.

Meet Deadlines. To be successful, it is absolutely necessary that applicants meet all financial aid deadlines and apply as early as possible within the time limits. Processing the nation's financial aid applications is a huge undertaking, and the deadlines are real. Although funds are limited, colleges try to distribute all the money they have. It is to their advantage to do so. The first piece of the pie is likely to be more generous than the last, and tardy applicants may not find anything but crumbs remaining.

Investigate. Parents and young people should also check the possibilities of scholarships offered by private groups, businesses, unions, clubs, and civic organizations. Investigate the "no-need" scholarships offered by colleges for academic, athletic, or extracurricular achievement, but don't hang on to unrealistic hopes. No-need scholarships are rare. If available at all, consider them to be the frosting on the cake.

More than 90 percent of financial aid money is distributed through colleges. Be skeptical of claims that hundreds of millions of dollars in financial aid goes unused every year. These have been traced to advertisements for fee-based computerized scholarship services. The claims have not been supported. Following a yearlong study of forty-five computerized scholarship services, the California Student Aid Commission concluded as follows:

> The claim that large amounts of financial aid go unused "could not be documented."
>
> Though some college officials see the computer services as potentially helpful in saving students time, others point out that the same information is available without cost from reference books and campus financial aid advisers.
>
> There is some unclaimed student assistance, but the amount of financial aid that is not used is "infinitesimally small."
>
> Computerized services appear to do very little by way of matching student characteristics with financial aid program requirements.

The notion of large amounts of unclaimed financial aid is largely myth. There is a small grain of truth to it, but basically it is misleading and doesn't square with the realities and opportunities most people face.

Stay In Touch. Parents and young people should stay in touch with high school counselors and college financial aid officers. They are the people in the best position to have information. College financial aid officers live with the complexities of financing a college education, and they must stay current. Plus, they may be able to use some discretion in determining and packaging financial aid awards. If parents can present a reasonable case, college financial aid officers may be able to adjust an award to better meet a student's needs. Remember, the financial aid officer's job is to do everything possible to help the student enroll in that institution. Financial aid officers are reasonable people.

College education is a big investment, and it deserves careful thought and planning. As complicated as it may seem, financial aid is one way to cut the costs of a college education for families and young people.

Financial Aid Application

Financial aid application and award procedures are highly standardized across colleges. Virtually all financial aid offices and government programs require submission of a need analysis form. Colleges generally use one of these two:

> The American College Testing Program's Family Financial Statement (FFS)
>
> The College Scholarship Service's Financial Aid Form (FAF)

The FFS and FAF are general purpose application forms. If a student is applying only for federal aid, such as the Pell grant, an Application for Federal Student Assistance (AFSA) may be used.

If you need information about these forms, help with filing them, or want to check on the status of a form you have filed, you may call the following numbers:

Form	Information	Status
Financial Aid Form (FAF)	215/750-8400	800/772-3537
Family Financial Statement (FFS)	319/337-1200	319/337-1200
Application for Federal Student Aid (AFSA)	800/333-4636	319/337-3738

In addition, some states have their own forms. For example, there are Pennsylvania Higher Education Assistance Agency forms (PHEAA) and Student Aid Application for California forms (SAAC). The College Handbook indicates what form a particular college requires, but it may be wise to verify this information directly with the college's office of financial aid.

Financial aid forms are useful tools for estimating need. Before considering how to meet estimated need, let's look at how college financial aid offices determine need. The formula is simple:

In the following sections I review how each component in the formula–estimated costs, estimated resources, and estimated need–is calculated. I use Jim's costs as a hypothetical example.

$$\begin{array}{l} \text{Estimated costs} \\ \underline{-\ \text{Estimated resources}} \\ \text{Estimated need} \end{array}$$

Estimated Costs. Costs vary from one school to another, and so does the amount of financial aid; so it is important to have a particular school in mind when estimating costs and needs. The annual cost of a college education has two components: direct and indirect costs. Direct costs include tuition and fees, books and supplies. Indirect costs include housing and meals, transportation, and personal expenses–clothing, entertainment, local travel, laundry and dry cleaning, and entertainment. Add these together and you have estimated costs.

Parents can make preliminary estimates of direct costs from information in *The College Handbook* or, in some cases, *The College Blue Book*. However, parents and young people should never assume that the direct cost figures listed in printed materials are up-to-date. Typically, published material is at least a year old and sometimes two years old. That means that the published costs could be 8 - 15 percent lower than current actual costs. Direct costs change annually, and reported figures should be used only as first approximations. Colleges will gladly respond to inquiries about current direct costs. Write or telephone the office listed under Address/telephone in *The College Handbook*.

Jim's Estimated Costs

Direct Costs	
Tuition and Fees	$ 1120
Books and Supplies	525
Indirect Costs	
Housing	1420
Meals	1080
Transportation	550
Personal Expenses	800
Estimated Costs	$ 5495

College catalogs, financial aid and admissions offices at colleges may also be helpful in providing estimates for indirect costs–housing, meals, and personal expenses. *The College Handbook* provides estimates, but these should be verified against current costs.

The one item of indirect expense for which neither college catalogs, admissions directors, nor *The College Handbook* can provide a reasonable estimate is the cost of transportation. Families can make a better estimate of transportation costs than anyone else. They need to take three things into account: distance, mode of transportation, and number of trips.

In making estimates, it is wise to err on the safe side–that is, err too high rather than too low. Generally speaking, undergraduates spend at least $425 a year on books and supplies and, say, $800 per year on personal expenses. Transportation costs? Your best estimate. *The College Board* estimates that students who commute will pay about $1,000 less per academic year than campus residents. The point is: Keep the total formula in mind. What a college education actually costs you and your son or daughter depends on several different cost considerations. Take them all into account.

Estimated Resources. Today's colleges expect that both the student and family will contribute to meeting the costs of a college education. The need analysis forms request detailed information on family size, income, assets, and expenses, which are used to establish the parents' and student's expected contributions. Let's go back to Jim's example. The major components to the expected student and family contribution are these:

Several considerations bear on estimating the family contribution. These change from year to year.

Estimated Need. Estimated need is the difference between estimated costs and estimated resources. In Jim's case, his anticipated costs exceed his estimated resources, and he will probably be eligible for financial aid. Whether or not he is eligible will be determined officially by processing the family need analysis form.

Jim's Estimated Resources

Student's Resources	
A set percentage of savings and other assets	$ 0
Portion of summer earnings	1,100
Earnings during school year	650
Other benefits	0
Family Contribution	
Formula based on income	775
Formula based on savings	550
Formula based on other assets	800
Estimated Resources	$ 3875

Processing Services. The family need analysis form is processed by an independent corporation, either The College Scholarship Service or the American College Testing Program's Student Need Analysis Service, and the service forwards the results to the colleges to which a young person applies. The goal of the standardized procedures is to equalize costs to students and families as much as possible.

Jim's Estimated Need

Estimated costs	$5495
Estimated resources	3875
Estimated need	$1620

There is another advantage to mailing the form to a financial aid processing service. The information isn't released to local school and community authorities. A young lady living in North Carolina told us: "My mother refused to complete a form for a scholarship that somebody gave me because she said the 'confidential financial info' in a small town was not so confidential." That is a most unfortunate state of affairs that might have been true when that young lady was in high school and information was processed locally. But today, family financial information never comes back to the community and school. It is confidential. The system works remarkably well in protecting family information. Indeed, I have never heard of an instance where information about family finances was leaked or disclosed by the financial aid processing services.

The estimate of resources available from parents and students will remain the same whether the college costs are high or low, so the estimates of a student's need will vary by college costs. Therefore, parents and their young people should not rule out colleges with higher costs because students may be eligible for higher levels of financial aid at more expensive colleges. Financial aid is based on total expenses, not just tuition and fees.

Financial Aid Packages

Colleges receive reports from the financial aid service based on the need analysis forms, and the college decides on the level of resources it will commit to a particular student. Colleges administer financial aid in three basic forms:

> Grants or scholarships: aid that does not have to be repaid
>
> Loans: low interest-bearing notes that eventually must be repaid
>
> Work study: jobs for students who need financial aid

Financial aid packages consist of some combination of these sources.

Financial aid resources come from the federal government, state governments, colleges, and private organizations and scholarship programs. Colleges usually put their own money into the ablest students. By comparison, when colleges administer federal programs, the funds tend to go to the neediest students. The way financial aid packages are put together is not necessarily carved into stone. Sometimes there is room to negotiate. Financial aid officers may be able to adjust the amount of the total package or increase a grant or scholarship component if parents and son or daughter can make a convincing argument.

Financial Aid Programs

Most financial aid originates with the federal government, but there are also state financial aid programs and other forms of aid located in the private sector. I identify these and suggest other ways of increasing resources and cutting costs in this section.

Federal Aid Programs

There are several eligibility requirements that students must meet to qualify for federal financial aid, one of the main ones being that a student must be enrolled at least half-time in a college–including universities, four-year colleges, two-year colleges, community colleges, vocational schools, technical schools, and hospital schools of nursing–recognized by the U.S. Department of Education. Other requirements include registration with the Selective Service, not being in default on previous education loans, making satisfactory progress towards a degree, and the like.

There are several basic federal programs for financing higher education. Some are student-based. They award or loan money directly to students or parents. Others are campus-based. The government funds the colleges, which in turn allocate money on the basis of federal guidelines.

Currently, there are six major federal financial aid programs in force. They are:

Pell Grants. The Pell Grant Program is the largest federal student aid program. It guarantees money for awards to qualified undergraduates with moderate to extreme need. The awards tend to range between $2,000 and $2,500 per year and are administered by colleges.

Supplementary Educational Opportunity Grants (SEOG). These are awards to undergraduates with extreme need. The maximum is usually about $4,000 per year. The program is open to both full-time and part-time students, including students who attend less than half time. The funds are administered by the colleges.

Carl D. Perkins Loans. These loans are made by colleges at favorable interest rates (5 percent per year) to full- and part-time undergraduates and graduates. Preference is given to students with extreme need including students who attend less than half-time. There are no annual limits to the loans but aggregate limits may be as low as $4,500 or as high as $18,000. The loans are administered by colleges.

Robert T. Stafford Loans. Formerly known as Guaranteed Student Loans (GSL), these are 8 percent loans made by a bank, credit union, or savings and loan association that are insured by state and federal agencies. Undergraduates, graduates and professional students who are enrolled at least half time are eligible. Loans range from about $2,500 to $7,500 per year. They are made by banks and credit unions and are guaranteed by the state or a private guaranteeing agency.

College Work-Study (CWS). This program provides subsidies to colleges for jobs for undergraduate and graduate students who need financial aid. The major part of the salary is paid by the federal government. The amount of pay the student receives depends on need and the kind of work a student does.

PLUS/SLS Loans. These loans are not based on financial need and are available to all. PLUS stands for Parent Loans to Undergraduate Students. SLS stands for Supplemental Loans for Students. PLUS/SLS loan rates are variable but may not exceed 12 percent per year. Students must enroll at least half-time. Typical limits are $4,000 per year and $20,000 aggregate. Both loan programs are administered by the Department of Education.

The names, number and details of federal financial aid programs change from year to year. The best way to stay informed is to ask for the latest Student Guide to Federal Financial Aid Programs from the U.S. Department of Education. These are available in career guidance centers or from high school counselors and college financial aid officers. Alternatively, call (301) 984-4070 or write to Federal Student Aid Programs, P. O. Box 84, Washington, DC 20044.

There are also student aid programs designed to assist special groups including Hispanics, Blacks, native Americans, and women. Organizations offering such assistance are listed in "Higher Education Opportunities for Minorities and Women" published by the U.S. Department of Education. This publication is available in libraries and career centers or may be purchased from the Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402. Phone: (202) 783-3238 for price and ordering information.

State Financial Aid

Each state has its own program of financial aid for higher education. No two state programs are the same. A few states have brochures that contain information on all financial aid programs within their particular state. Generally, however, several different agencies administer state programs, and students and their parents may have to piece together the information from different sources. The amounts of available state financial aid are not large and, in total, represent only about 5 or 6 percent of all available financial aid.

In his book, *Don't Miss Out*, Robert Leider classifies different categories of state financial aid programs. Three are need-based grant programs: grants restricted to in-state study, grants to study in other states with reciprocity agreements, and grants for study in accredited schools in any state. Seven are miscellaneous grant programs. Merit programs are grants based on academic accomplishment. Loans are programs in which the state operates a guaranteeing agency under the federal Guaranteed Student Loan program. Special fields refers to programs that train people in areas in which the state experiences labor shortages. Minority group programs are generally limited to native Americans. State work-study programs are job programs similar to federal work-study programs. Veterans programs are earmarked for state residents who served in the military, usually in time of war. National guard programs refer to special benefits for people who serve in the state's national guard. Finally, Leider lists three dependent programs that apply to deceased or disabled veterans, prisoners of war or personnel missing in action, and police or firefighters killed on duty. Dependents in each of these categories may be eligible for special state financial aid programs.

Tuition aid from employers is probably the most overlooked source of funds for students.

Parents and young people who need information about state aid programs should contact the state education office listed for each state in *The College Blue Book* or the college admissions office referenced in *The College Handbook*. High school guidance counselors and college financial aid officers may also be knowledgeable about state financial aid programs, though they are sometimes more familiar with federal programs.

Other Assistance

There are other sources of financial aid. Cities and towns provide assistance to young people through civic groups and business associations. Private foundations award loans and scholarships based on competition. The community affairs column in local newspapers occasionally carries notices of awards for which residents may qualify.

Young people may qualify for loans, grants, or scholarships on the basis of parental military service, union membership, membership in fraternal or religious organizations, or employer programs. Similarly, young people's characteristics and activities–including jobs held, religious affiliation, minority membership, nationality, being female, being disabled, having particular career interests or talents–may also qualify them for financial aid. Another possibility is to take advantage of military educational benefits, which I discuss in a later chapter.

If your son or daughter is enrolled in high school, check with the school guidance center about local sources of financial aid. Similarly, when your child enrolls in college, check with the college financial aid office.

Information. There are two publications that may be particularly useful to parents and young people who need to explore financial aid information. The first provides scholarship information. It is an annual publication of the American Legion titled *Need a Lift?* It costs $1 (including postage and handling) and may be ordered from: American Legion, National Emblem Sales, P. O. Box 1050, Indianapolis, IN 46202.

The second publication explains how student financial aid works and how to apply for it. The name of the publication is *Meeting College Costs*. It is published by the College Board and is available in career centers and libraries.

Cutting Costs

It may be possible to cut costs–a second way to manage educational expenses. One way is to "shop for credits"–that is, compare the cost per credit hour at various institutions. Costs per credit hour at state universities, state colleges, or local community colleges will usually be less than at private schools.

Employer Tuition Programs. Since 1978, federal legislation enables employers to deduct educational assistance costs as business expense, and many companies have been paying part of their employees' educational expenses. Tuition aid from employers is probably the most overlooked source of funds for students. Ivan Charner, research director for the National Institute for Work and Learning, reports that more than 80 percent of companies with 500 to 1,000 employees have tuition benefit programs; 92 percent of companies that employ between 1,000 and 10,000 people offer tuition plans; and 95 percent of companies with more than 10,000 workers offer tuition plans. Yet most workers do not know they are eligible, the plans are not well understood, and company tuition plans are never thought of by most employees.

Employer tuition benefit programs may benefit you in two ways. First, your son or daughter may work for an employer that has an employee tuition program. Check it out, especially if your son or daughter works for a large firm. Second, you or your spouse may work for a firm that has hidden employee family benefits. Again, check it out if that seems reasonable. Estimates are that, potentially, the annual amount of job-based tuition aid available is $7 billion, but only 3 to 5 percent of employees take advantage of the programs and use only about $350 million annually.

On-Campus Strategies. Another way to cut costs is to start out at an inexpensive two-year or four-year college, take the basic courses required in most colleges, then transfer to a more expensive four-year college. The student earns a more prestigious degree without paying the higher costs for four years. The October 13, 1983 edition of the Wall Street Journal reported the example of a student who transferred out of Georgetown University to a less prestigious college because he could transfer the credits back to Georgetown and it would cost him $7,300 less.

Some high schools offer courses carrying college credit that may reduce later college costs. Your son or daughter may be able to save time and expense through College-Level Examination Programs (CLEP), which enable them to satisfy course requirements by examination rather than by course enrollment. High School students may take advanced placement tests for college credit and realize a similar saving.

Other economies may be achieved. Some colleges offer a book rental program. That can cut costs. Students can make-do with used textbooks, live at home or in a low-cost apartment, use public transportation instead of personal car, or take four years of credits in three years' time.

Though it is unlikely that students can earn more from summer employment than their annual college costs will be, many can save more from summer earnings than colleges expect of them. Finally, many students are responding to increased education costs by enrolling part-time and working. Part-time enrollments have been increasing more than full-time enrollments as many students take lighter academic loads in order to keep up with both work and study.

Today's college programs are flexible. This gives young people more ways to put together an educational program that will meet their goals.

Cooperative Education

Another way to beat the high costs of college education is to enroll in a college that offers cooperative education programs. Cooperative education integrates periods of classroom study with periods of related off-campus work experience. It is an arrangement in which young people go to school and take jobs in the same subject area that they study. Unlike the "practicums" of days gone by when, for example, a student in education would get academic credit for practice teaching, students in cooperative education programs primarily work for pay–to put themselves through school. Academic credit may or may not be given. The program normally lasts five years and continues twelve months a year.

For the first year or two, students take a basic curriculum and courses in their majors. Then, over the next four years, they alternate quarters or semesters of full-time schooling and full-time work. An arrangement more popular in two-year colleges is the parallel program in which students go to school half-days and work the other half.

More than 1,000 colleges, a third of all colleges in the country, offer cooperative education programs involving some 200,000 students. Some universities, for example, Drexel in Philadelphia, the University of Detroit, and Northeastern University in Boston, enroll most of their students in cooperative education programs. Northeastern University's 18,000 undergraduates have the most extensive offerings complemented with jobs in more than 2,500 firms. Students majoring in engineering or business have the most opportunities to enroll, but about half of all programs are open to students in all majors. The programs are about evenly represented in two- and four-year colleges and more than 200,000 students are enrolled in cooperative education programs across the nation.

Advantages. Cooperative education programs may lengthen the duration of college by as much as a year, but there are also advantages to consider. Many students are nearly able to pay as they go–that is, earn enough money working to pay their tuition. Students who are not certain about their career goals can gain on-the-job experience over a range of occupations. Those with definite goals are often able to work at the same site, accumulate experience, increase their responsibilities, and earn pay raises. Gaining work experience while studying provides references and advantages when it comes to entering the job market. More than half of cooperative education students receive offers of permanent employment from their co-op employers.

Studies of cooperative education programs and students are scarce, but some that have been done suggest that co-op education graduates receive higher wages and earlier promotions than college graduates who did not participate in cooperative education programs. Other studies suggest that cooperative education students do better academically, and that higher percentages continue to college graduation than do noncooperative education students.

Information. The best general guide to co-op programs is the Co-op Education Undergraduate Program Directory which lists, by state, the schools offering co-op, the academic fields in which co-op is available, and the address and phone numbers of the sponsoring college offices. If cooperative education sounds like a possibility for your son or daughter, you may want to write for a copy of the directory from the National Commission for Cooperative Education, 350 Huntington Avenue, Boston, MA 02115-5005.

Parental Influence During the College Years

Managing the parent-child relationship–knowing when to speak and what to say–can be difficult as young people grow older, leave high school and head out on their own, possibly to college. Young adults give mixed reports about parental involvement in their life plans. On the one hand, some of our 7,000 respondents in the Career Development Study emphasized the need for parents to stay directly involved. What might be done to help young people prepare for the future? A surveyor for an engineering and architectural firm, answered: "Parents should help in establishing goals and guidelines for the first couple of years after high school."

On the other hand, parental involvement was a problem in some cases. A ticket agent for a firm that operates a car ferry told us his biggest problem since leaving high school was "being pushed by parents to do what they wanted for me, not for what I wanted." A school teacher said: "Choosing a career was difficult for me. I had difficulty separating what I wanted for myself from what my parents wanted for me." One young man held sixteen full-time jobs over twelve years after leaving high school and went to actors' school in New York City but for the last month worked as a waiter in a restaurant. He said that his biggest problem was "discovering and communicating with parents that my idea and theirs concerning my vocation were entirely different."

Parents have a big influence on their sons' and daughters' career plans, and that influence extends well into the college years.

Whether or not parents manage the relationship well, parents do have a continuing influence on their sons' and daughters' career plans past high school. According to a four-year study reported by Stanford University's dean and psychiatrist, Dr. Herant Katchadourian, four out of five Stanford University juniors seek advice from their parents on career planning. As freshmen, more than half describe their parents as moderately to extremely influential in their selection of college courses; and when it came to careers, parental influence was at the top of the list. Seven out of ten freshmen reported that parents were moderate to major influences on their career choices. That figure increased to nearly eight out of ten for Stanford juniors, and two out of three juniors said career advice from their parents was moderately to very useful.

Parents have a big influence on their sons' and daughters' career plans, and that influence extends well into the college years.

Timetable for College Planning

One of the ways to lower the frustration that comes with choosing a college and applying for financial aid is to know what parents and young people need to do and when. Consider the following as a checklist to follow during your son's or daughter's junior and senior years in high school.

Junior Year: Fall Semester

Junior year, fall semester is the time to begin talking with your son or daughter about what he or she wants from the college experience. See the chapter, "Choosing A College" for ideas. Also, the introductory material in *The College Handbook* has an excellent short section–about ten pages long–on choosing a college.

During the fall semester, junior year, it is time to take final stock of family finances to determine what resources you have available. What is the cost of a year of college at the institutions your son or daughter may be thinking about? Is your son or daughter likely to qualify for special scholarships or grants? Are there ways you can improve the probabilities of getting outside help? Both the College Board and the American College Testing Program provide booklets for parents on meeting college costs. These are often available in high school career centers. It is not too early to get information about financing a college education and to begin following the news concerning changes in federal student aid programs.

The College Scholarship Service of the College Board provides an Early Financial Aid Planning Service that some parents use. Information about the service and the amount of the fee is available in high school guidance centers.

Junior Year: Spring Semester

This is the time to get serious about helping sons and daughters identify colleges that match their interests. Try to come up with several college possibilities, and remember: Don't eliminate colleges solely on the basis of costs. Financial aid is based on estimated need–the difference between costs and resources. Use *The College Handbook* or a similar college guide to get information. Attend college fairs in your community with your son or daughter and talk with college representatives. Also, make a point of talking with young people, and their parents, who are attending colleges that may interest your son or daughter.

Get as much information as you can on those colleges so that you have specifics to talk about when it comes to trying to match your son's or daughter's interests with school possibilities.

Determine what admissions tests are required by the colleges that interest your son or daughter. This information is available from college catalogs and admissions offices, *The College Handbook* and similar guides, and from career counselors.

Encourage your son or daughter to take the SAT or ACT, whichever is required, during spring semester of the junior year. This allows them an opportunity to retake the test, if they wish, during the fall semester of the senior year. Encourage your son or daughter to read the booklets in the registration packets and to take the practice tests. This will help them avoid confusion and reduce anxiety. Review the material on SAT and ACT tests in the "Choosing A College" chapter. When you receive the SAT or ACT test report, work through the results with your son or daughter so that both of you understand what the scores mean.

Summer

Encourage young people to write to colleges that interest them. Ask for three things: college catalogs, financial aid information, and applications for admission.

Summer is also a good time to talk with students home from colleges that your son or daughter may be thinking of attending.

Senior Year: Fall Semester

Fall semester in the senior year is the time to pay attention to financial aid announcements: deadlines for application, application procedures, and special programs. Suggest that your son or daughter check the high school counselor's office and guidance center bulletin board on a weekly basis.

Your son or daughter should take the SAT or ACT if it was not taken earlier or there are good reasons to retake it.

Narrow college choices to a manageable number. It may be possible to visit colleges. Try to visit on weekdays when students are on campus and administrative offices are open. Make an appointment to discuss policies, forms, and procedures at the financial aid and admissions offices.

Know the admissions process and admissions and financial aid deadlines for colleges that interest your son or daughter. Consult *The College Handbook* and college catalogs. Send admissions applications to the colleges.

November and December of the senior year is the time to request financial aid application forms: the American College Testing Program's Family Financial Statement (FFS) or the College Scholarship Services's Financial Aid Form (FAF). The Application for Federal Student Assistance (AFSA) may be used if application is made only for federal financial aid. *The College Handbook* and college catalogs indicate the financial aid form that particular colleges require. Forms are available from high school counselors and college financial aid offices.

Senior Year: Spring Semester

Encourage your son or daughter to continue checking on a weekly basis with the counselor's office and career center bulletin board for scholarship and financial aid announcements.

January and February in senior year is the time when completed financial aid application forms are due. Complete the forms carefully and thoroughly and mail to the appropriate need analysis service at least six weeks before the financial aid deadlines.

You will receive a report from the need analysis service that gives you an "estimated family contribution" figure. Use that figure as a rough guideline to determine your son's or daughter's "estimated need" (subtract the estimated family contribution from the estimated costs for colleges of interest). Estimated need is the figure that college financial aid officers will try to meet.

When completing financial aid application forms, your son or daughter will indicate colleges to which the estimated need information will be sent. Different colleges may offer different financial aid packages. Evaluate the packages, but allow your son's or daughter's interests to weigh heavily in the decision about which college to attend.

What Parents Can Do

Parts 3 and 4 of *How to Help Your Child Choose a Career* shift attention away from career choice and focus on career preparation. Part 3 discusses additional schooling options.

There are three basic career paths young people can follow after finishing high school, and parents can help their sons and daughters understand their schooling options.

Young people who elect to go the additional schooling route have three possibilities to consider: four-year colleges; two-year junior and community colleges; and business, trade, vocational, or technical schools

It is important that together you discuss how to choose a college. It is useful to point out the kinds of colleges from which young people can choose (see earlier chapters). Help your son or daughter understand the differences between four-year colleges; two-year junior and community colleges; and business, trade, or technical schools. Make sure they understand the difference between degrees and certificates, for example. Once young people understand the

- Get more schooling
    - Four-year colleges
    - Two-year junior and community colleges
    - Business, trade, vocational, or technical schools
- Train for a career while working
    - Apprenticeship
    - Military service
    - On-the-job training
- Work at a full-time job

basic differences between colleges and the kinds of educational programs they offer, it is easier for them to narrow the options to the kinds of colleges and programs of study that interest them. See the section on "personal goals and interests" in the "Choosing A College" chapter for topics parents and young people might want to discuss in narrowing the options.

There are two labor force realities that parents may want to impress upon their sons and daughters:

> Most occupations require additional education or specialized training beyond high school.
>
> Employers hire people on the basis of their credentials. Additional education or specialized training opens up more and better occupational opportunities.

Parents can reinforce these career path options and labor force realities from time to time when they talk with their sons and daughters.

Information on educational options comes from reference books in career centers and libraries. I suggest *The College Handbook* as the best reference book for information on four-year colleges. *The College Blue Book: Occupational Education* is a good reference book for information on two-year colleges and technical schools, though it is more difficult to locate.

Other Resources

There are other resources that may assist parents and young people who are considering a business, trade, vocational or technical school. *Getting Skilled: A Guide to Private Trade and Technical Schools* by Tom Hebert and John Coyne is a useful little paperback for young people who are considering private or trade schools that offer skill training. Private trade and technical schools sometimes offer free copies to prospective students.

The National Association of Trade and Technical Schools (NATTS) is also a good source of information. Among the Association's publications are the *Handbook of Accredited Private Trade and Technical Schools* and a pamphlet titled "How to Choose a Career and a Career School." These and other materials are available from NATTS, Department OOH, P. O. Box 10429, Rockville, MD 20850.

The Association of Independent Colleges and Schools (AICS) publishes the annual *Directory of Educational Institutions.* Most AICS-accredited institutions are business schools and offer programs in secretarial science, business administration, accounting, data processing, court reporting, paralegal studies, fashion merchandising, travel/tourism, culinary arts, drafting, electronics, and the like. For a copy of the *Directory*, write or call: Association of Independent Colleges and Schools, 1 Dupont Circle NW., Suite 350, Washington, DC 20036. Phone: (202) 659-2460.

Career Explorations Workbook

Part 3 in the Career Explorations Workbook concentrates on additional schooling options, one of three basic career paths young people may choose to follow after high school. Turn to Part 3 in the Workbook now. Read the instructions. Note that young people need to complete only those career preparation options in Parts 3 and 4 that are indicated by item number 5 in Part 2. If none of the options in Part 3 apply, go directly to Part 4.

One way to help young people sort out their educational options is to help them locate information. Part 3 of the workbook lists sources of information for all additional schooling possibilities. The information is readily available in reference books in career centers and libraries, and you may want to go along with your son or daughter to complete the material on schooling options.

Item number 5 in Part 2 indicated whether four-year colleges or two-year colleges and technical schools are appropriate forms of career preparation for the occupations that interest your son or daughter. Now is the time for your son or daughter to complete the information on appropriate schooling options, Part 3 in the Workbook. Information on schooling options, like the information on occupational possibilities, should be summarized on the worksheets that were used in Part 2.

Part 3: Career Explorations Workbook

Schooling Options

Information for the sections on four-year colleges, two-year colleges, and technical schools comes from reference books in career centers and libraries.

If you are thinking of attending college–whether four-year, two-year, or business, trade, vocational, or technical school–be sure to talk with your parents about how to choose a college.

Four Year Colleges

The College Handbook is an excellent reference book for information on four-year colleges, and most libraries and career centers have copies. If you cannot locate a copy of the Handbook, try similar reference books:

Barron's Profiles of American Colleges

Chronicle Four-Year College Data Book

College Planning/Search Book

Lovejoy's College Guide

Peterson's Annual Guide to Undergrduate Study

Your librarian or counselor can help you.

Write the number of the question and the key words on your worksheet. Fill in the information from one of the reference books.

1. NAME OF COLLEGE?
   Source of information?
2. GENERAL INFORMATION:
   Size:
      Large (over 10,000 students)?
      Medium (1,000 to 10,000 students)?
      Small (fewer than 1,000 students)?
   Location:
      Very large city?
      Large city?
      Small city or town?
   Environment:
      Urban?
      Suburban?
      Rural?
   Accreditation:
      Is college accredited by regional association?
      Other accreditation? (If "yes," what is the accrediting association?)
   Church affiliation? (If "yes," what denomination?)
3. CURRICULUM:
   What degrees are offered?
      Associate degree?
      Bachelor's degree?
      Master's degree?
      Doctorate or other advanced professional degree?
   What major fields of study interest you?
   What special academic programs and student services interest you?
4. ADMISSIONS:
   What proportion of students applying for admission are accepted? (Nearly all? About half? One-quarter or less?)
   What are the admissions requirements?
   What are the test requirements for admission?
   What are the average test scores for enrolled freshmen, and how do your scores compare with the average?
   What are the application procedures and closing date for applications?
5. STUDENT LIFE:
   On the basis of your grades in school, what do you think is your class standing? (Top 10, 20, 30, 40, 50 percent?)
   Where did the majority of freshmen rank in their high school class?

How do you think the academic competition would be for you at this college? (Stiff? Moderate? Minimal?)

What student activities interest you at this college?

6. ANNUAL EXPENSES:

   Tuition and fees?

   Room and board?

   Books and supplies?

   Other expenses? (*Comprehensive fee* means the amount includes tuition and fees and room and board.)

7. FINANCIAL AID:

   What percentage of freshmen received financial aid? (Divide the number who received aid by the number of freshmen and multiply by 100.)

   What are the application procedures?

   What is the closing date for financial aid application?

   What need analysis form is required? (FAF? FFS? Other?)

When you have completed all career-preparation options for this occupation, do the same for the next occupation that interests you. When you complete the career-preparation options for all occupations, continue with Next Steps," the final section of Career Explorations.

Two-Year Colleges Or Technical Schools

The College Blue Book: Occupational Education is a good reference book for information on two-year colleges and technical schools. If you can't locate the Blue Book, try the following for information on two-year colleges:

Barons Guide to Two-Year Colleges

Chronicle Two-Year College Data Book

Lovejoy's College Guide

The College Handbook

Your librarian or counselor can help you.

Try these for information on technical schools:

Chronicle Two-Year College Data Book

Lovejoy's Career and Vocational School Guide

Write the number of the question and the key words on your worksheet. Fill in the information from one of the reference books.

1. NAME OF SCHOOL?

   Source of information?

2. GENERAL INFORMATION:

   What type of college or school is this?

   Is a high school diploma required for admission?

3. When may you REGISTER?

4. What is the cost of TUITION?

5. ENROLLMENT:

   Large (over 1,000 students)?

   Medium (100 to 1,000 students)?

   Small (fewer than 100 students)?

6. What DEGREES AND CERTIFICATES does the school award?

7. ACCREDITATION:

   What is the school accreditation? (If none, check out the school carefully.)

8. SERVICES:

   Is financial aid available?

   Is a placement service avaliable?

9. CURRICULUM:

   What programs of study interest you?

When you have completed all career-preparation options for this occupation, do the same for the next occupation that interests you. When you complete the career-preparation options for all occupations, continue with "Next Steps," the final section of Career Explorations.

4

CAREER PREPARATION: EARNING WHILE LEARNING

Eleven

Apprenticeships, Industry Training, and Federal Civil Service

Today's young people have many career preparation options, but they have to be able to see through the forest to find the trees. Some of the possibilities allow them to work while preparing for a career, what I call "earning while learning" options. These opportunities are especially attractive to young people who are eager to begin careers, need a steady income immediately after high school, or are more inclined to go to work than go to college. A legal secretary in San Francisco urged: "Don't tell them [young people] college is the end-all solution to all of one's chances for satisfaction in work life," she said. "Help students explore any and all avenues that would be appropriate to his or her individual style and abilities."

One possibility for young people who want to get going is to prepare for a career by apprenticeship. Another possibility is training and education programs offered by industry. Still another is federal civil service.

Apprenticeships

Apprenticeships are formal training programs, usually for manual occupations, that require workers to have a broad understanding of their work and knowledge of how their work relates to other tasks and workers on large projects. For example, workers who build the internal walls in high-rise office complexes must have a general understanding of the requirements for electrical conduits and heating/air conditioning ducts that other trades people will install later. Apprenticeships combine supervised on-the-job training with related technical studies. The study may take place in a classroom or home-study setting.

An apprentice is an inexperienced worker who signs a contract to participate in a trade training program. Journey workers, workers at the next highest level of certification who have learned the trade and are experienced, teach the entire range of skills within an occupation to the apprentice. The apprentice must perfect each skill at the established levels of performance speed and accuracy required on the job to master the occupation. It's a challenging training program, as a cabinet maker in a furniture manufacturing company pointed out: "A 4-year apprenticeship is just as difficult, stimulating, and rewarding as a 4-year college degree, I would say, having experienced both."

Brief History of Apprenticeships

For thousands of years skilled artisans taught their crafts to young workers in a master-apprentice system. The apprentice lived with the master craftsman and received food, clothing, and shelter in return for learning the craft. When the apprenticeship period was over, the apprentice was recognized as a journey worker.

The system required apprentices to make a masterpiece as a final test of competency. Apprentices submitted the masterpiece for inspection and approval by the master craftsman. Since modern apprentices begin producing immediately and supervisors carefully inspect each job, a final test piece, the masterpiece, is not usually required.

Apprenticeships have existed in the United States since the seventeenth century, but structured apprenticeship programs began with the National Apprenticeship Act of 1937. Today's apprentices are regular members of the labor force, earn wages, work a normal work week, and live in their own homes. They are certified as journey workers upon completion of the apprenticeship contract.

Management of Apprenticeships

By its nature apprentice training requires close cooperation between skilled journey workers and management, which is responsible for program efficiency. Apprenticeship programs are often thought of as union programs. Though none are totally union sponsored, unions support the apprentice system and influence the ratio of journey workers to apprentices. Some criticize that unions in some crafts have used the apprenticeship system to regulate their labor markets in ways that advantage union members.

Employers may sponsor apprenticeship programs individually or through industry associations. Employer-union cooperation usually takes the form of union-management committees, generally called joint apprenticeship committees. The union-management committee's function is to set policies that govern the apprenticeship program.

The federal government supports and regulates apprenticeship programs through the Bureau of Apprenticeship and Training. The Bureau establishes minimum standards, registers programs, provides technical assistance, and maintains records on apprenticeships. It also publishes standards for each apprenticeship program registered with the Department of Labor. The standards contain detailed information about the kinds of work performed and the courses required as part of the apprenticeship training.

Apprenticed Occupations

Federal regulations define an apprenticeable occupation as one that:

> Is customarily learned in a practical way though a structured, systematic program of supervised on-the-job training.
>
> Is clearly identified and commonly recognized throughout an industry.
>
> Involves manual, mechanical, or technical skills and knowledge that require a minimum of two thousand hours of on-the-job work experience.
>
> Requires related instruction to supplement the on-the-job training. Such instruction may be given in a classroom, through correspondence courses, self-study, or other means of approved instruction.

About 95 percent of apprentices work in about fifty occupations. Most apprentices are in three industrial sectors: construction, manufacturing, and service. Nearly two-thirds are in the building trades. Programs for carpenters, electricians, and the pipe trades account for more than a third of apprentices.

The manufacturing industry has the second largest number of apprentices, about a fourth of the total. The most frequent occupations apprenticed include machinists, tool and die makers, and welders.

Slightly over 6 percent of the apprenticeships are in service occupations. Examples include meat cutter, auto-body repair mechanic, dental laboratory technician, and barber/cosmetologist.

Some people find apprenticeships appealing because they like to work with their hands. A clerical worker for an electrical equipment manufacturer told us: "I have an excellent job, but I'd like to get out of the 'professional' field and do a trade to work with my hands." A postal clerk with a B.A. degree in history said essentially the same thing: "Some people, including myself, would rather do physical labor than sit behind a desk and get fat." Most, but not all, apprentices train for manual occupations. Following are ten occupational categories with large numbers of apprenticeships:

Carpenters

Electricians

Plumbers

Pipe fitters, sprinkler fitters, and steam fitters

Machinists

Tool and die makers

Sheet metal workers

Automotive and related mechanics

Bricklayers and stone and tile setters

Structural steel workers

Together these occupational categories account for nearly two-thirds of all registered apprentices.

Entry into Apprenticeships

In recent years the number of qualified applicants has been far greater than apprenticeship openings. There are three or four applicants, sometimes more, for every apprenticeship opening. In the construction trades there are about eight qualified applicants for every opening. Because of the number of applicants for available apprenticeship openings, the openings may not be advertised widely, and potential applicants need to stay in contact with union-management committees, joint apprenticeship committees, the local Bureau of Apprenticeship and Training, or an Apprenticeship Information Center.

The average age of an entering apprentice is twenty-three. Most have twelve years of schooling, and many have additional formal education. More than a third are veterans, and most had other jobs before entering their apprenticeship. About a third of entering apprentices have a relative in the same trade.

Qualifications

Apprenticeship program sponsors look for people who have the mechanical and mental abilities to master the techniques and technology of the trade. Requirements emphasize four qualifications: age, education, physical condition, and aptitude.

Most programs set minimum age for entry at eighteen, because company insurance programs frequently cover only workers eighteen and older. In practice, many programs give preference to veterans.

The minimum level of education required varies from program to program. Most require a high school diploma or its equivalent, though some set minimums as low as the sixth grade. Regardless of formal requirements, apprentices need a solid background in reading, writing, and mathematics. Some programs recommend specific course backgrounds or have special math requirements.

Apprenticeship programs prepare participants for manual tasks, and apprentices must be physically fit. Most programs require good health documented by a physical examination. Sometimes programs require specific levels of physical ability. Physical handicaps that do not interfere with performance are not formal grounds for disqualifying an applicant.

It is not necessary for applicants to have advanced specific knowledge of the trade, though some knowledge may make entry into an apprenticeship program easier. Many programs require that applicants demonstrate certain aptitudes, and some companies devise and administer their own tests that measure applicants' familiarity with the tools and terms of the trade.

Many service occupations require that applicants have interpersonal skills. In addition, some states have residency requirements that vary from six months to a year. Applicants may be in competition with each other, and it is to their individual advantage to show a willingness to learn the trade and give evidence of interest and motivation.

Application Procedures

There is considerable diversity in the requirements for entering apprenticeships; nonetheless, the following are generally required as part of the application package:

Birth certificate

Transcripts of high school and other courses

Letters of recommendation from employers

Documentation of blue-collar work experience, whether paid or unpaid

More specific requirements and procedures apply to construction trades, manufacturing industries, and service industries.

Construction Trades. Apprenticeship programs in construction trades generally open once or twice a year for a few weeks. The number of apprenticeship openings varies from time to time and place to place, as does the number of applicants; but it is not uncommon to have ten to thirty applicants for every opening in such trades as electricians, plumbers, or sheet metal workers.

Most joint apprenticeship committees establish their own systems for recruiting and selecting apprentices for the program. Committees generally accept applications for a period of thirty to ninety days. If an applicant meets the minimum qualifications, the committee notifies the applicant to report for an apprenticeship qualifying test, if a test is required.

Applicants who pass the qualifying test are invited to meet with the joint apprenticeship committee for an interview. The interview is a crucial part of the application process. The joint apprenticeship committee evaluates all applicants on such factors as attitude, motivation, interest in the trade, willingness to accept direction, and demonstrated knowledge of the trade.

It may take several months, even years, for an applicant to be placed, depending on the number of applicants and the number of openings.

The committee rates each applicant on the basis of test scores, interview, educational qualifications, letters of recommendation, vocational education courses, and previous experience. The committee ranks all applicants and enters the names on an apprenticeship register. It may then take several months, even years, for an applicant to be placed, depending on the number of applicants and the number of openings.

There are two general methods for placement into apprenticeship programs in the construction industry: the "hiring hall" method (sometimes called "list trades") and the "hunting license" method. In the hiring hall method, the joint apprenticeship committee takes names of applicants from the top of the list of eligibles as openings appear, and applicants report either to the union hiring hall for assignment or to the appropriate training site to begin classroom work. In the hunting license method applicants receive a blank "letter of intent" to hire and must find a participating employer to hire them. Carpenter, painter, and dry waller are trades that usually use the hunting license method.

Manufacturing Industries. Many apprenticeship programs in manufacturing draw applicants from current employees. Collective bargaining agreements may mandate such provisions. Generally, the aspiring apprentice must first find an entry-level job in a union shop. Most are assembly line work. In such settings the method of getting from an entry-level job to the apprenticeship program may involve getting on a seniority list.

This system also operates in large single-plant industries. However, instead of one apprenticeable trade represented by a single outside union, there may be several apprenticeable trades, all represented by the same union within a single plant–such as the United Auto Workers at General Motors. The automotive, steel, and transportation industries are examples of single-plant industries with multiple apprenticeable trades.

Service Industries. Service industries frequently use some of the same methods as construction and manufacturing industries to recruit and hire apprentices. Professional or trade associations may operate apprenticeship programs in close cooperation with local colleges or technical schools.

Traditionally, an applicant with a close relative in the trade had an advantage in competing for an apprenticeship. "Not anymore," say the sponsors. Although a skilled craft worker in the family may help an applicant find out about openings, under law all applicants must qualify to enter registered programs, and selection processes must treat all applicants equally. People who have close contact with craft workers in a trade are likely to be more familiar with that trade, and that is an advantage.

I stated in Part 1 that I cannot tell my son very much about shrimp boats, and I really don't know very much about lobster fishing off the Maine coast; but I can show him what's in my briefcase and in my office. Families in the trades pass along important career information in the same way.

The Apprenticeship Contract

Apprenticeship programs involve written contracts. The employer agrees to provide instruction and practice leading to the acquisition of specific skills, to make every effort to keep the apprentice employed, and to comply with program standards. The apprentice agrees to follow the guidelines and to work for the employer at fixed rates of pay. Each program follows written standards that establish minimum qualifications, outline the work experience processes, determine the number of hours required for each, set apprenticeship wage rates, and establish the length of training and working conditions.

Duration, Pay, and Study. Traditionally, apprenticeships last from four to six years, although there is a trend toward shortening the period. In reality, the time span depends on how long it takes the apprentice to complete the hours of work and class time. If the apprentice is laid off, it takes longer to complete the program.

Apprentices are paid, full-time employees of the company in which they apprentice. Their rate of pay usually starts at about 50 percent of the journey workers' wage. Apprentices receive pay raises relative to the total number of hours they work. By the end of the apprenticeship program apprentices earn about 95 percent of the journey worker rate.

The apprentice must attend classes or complete home-study materials. Instruction covers the theory behind the techniques of the trade, how certain tasks are performed, and shop safety precautions. Trade manuals cover these subjects. If the program requires classroom instruction, the schedule usually includes two class periods per week, perhaps two evenings or an evening and a Saturday morning. Apprentices must attend classes whether or not they are working.

When the apprentice has successfully met all program requirements–including work experience, performance standards and required classroom instruction–the apprentice is awarded a journeyman card. The journeyman card is a form of certification that assures employers and co-workers that the card holder is a journeyman in the trade and is entitled to associated rights and privileges. These include a higher pay scale, increased job security, and often times supervisory responsibilities at work sites.

Probationary Period. All apprentices go through a probationary period of acceptance (two to six months) during which time sponsors may ask apprentices to leave the program without cause. Lack of interest, bad attitude, poor attendance, tardiness, poor work habits or course grades, lack of interpersonal skills, and bad reports from supervisors are often the reason.

Probationary periods may be hard times for apprentices. Not only are apprentices trying to prove their performance levels on the job, but hazing is part of the expected initiation ritual. There is a mystique and fraternal character about apprenticeships, and the initiated expect the new apprentice to accept it. Assignment of menial tasks, tricks, name calling, and ridicule are part of the process.

In his book, *Ten Thousand Working Days*, Robert Schrank reports such a distasteful hazing experience and the intensity of his own emotions: "Covered from head to foot with pieces of toilet paper..., I finally found a way out of that flooded room, and there were the guys holding their noses and rolling with laughter. I was filled with rage, tears, and fury."

Of course, work-related problems don't necessarily end after the probationary period. An apprentice carpenter described "what the world is really like" this way: "When you get the job you have to put up with power hungry bosses and back-stabbing, brown-nosing co-workers. It doesn't always happen but it's best to be prepared. Tell them that sometimes you have to close your eyes, grit your teeth, and plunge right in!" The hazing that goes along with probation in the apprenticeship program may be a good introduction to real life.

Advantages

Apprenticeships offer an efficient way to acquire skills. They provide workers with versatility by teaching all aspects of a trade. Versatility makes the apprenticeship graduate more adaptable and less vulnerable to shifts in demand and technological change.

Apprenticeship programs offer a young person a planned and organized program for learning a skill, a combination of on-the-job and related classroom training, entry-level positions on a career ladder, compensation that is usually above minimum wage, and certification of competency measured by industrial standards.

Unions regulate apprenticeship training programs. They monitor and supervise labor force supply and demand within the trades, and that often assures workers a good standard of living. The journeyman card certifies that the card carrier has recognized skill levels required by employers. Journey worker credentials are transportable. They enable the card carrier to relocate with established qualifications and to climb the career ladder on the basis of demonstrated skill.

Disadvantages

Beginning apprentices may feel that their work is menial and boring. The probationary period may be demeaning, and the work may be technically difficult or physically demanding. More advanced apprentices may feel that they are underpaid. Apprentices face possible unemployment because of economic conditions. In addition to their full work schedule, the apprenticeship contract requires three hours or more of classwork per week.

Skilled workers are not totally shielded from technological advances, and there are shifts in employment demands within the trades that affect apprentices and journey workers. For example, artificial brick and bricklaying machines have increasingly reduced the demand for bricklayers. Dry wall has reduced the need for plasterers. However, at the same time, new types of apprenticeship trades are emerging, and displaced journey workers may be retrained in areas that take advantage of their technical knowledge and skills.

Trade Variations

Construction, manufacturing, and service trades each has its own advantages and disadvantages. Construction frequently requires intense physical activity in cramped quarters, exposure to weather, seasonal employment, and sometimes dangerous working conditions. Nevertheless, annual earnings for construction workers are among the highest for skilled workers.

Skilled workers in manufacturing may work in distasteful conditions–dirt, grease, heat, cramped working conditions, and sometimes on ladders or scaffolds. Nonetheless, manufacturing plants frequently operate several apprenticeship programs that offer multiple options and trade possibilities.

Working conditions in service jobs are usually better, and there are more opportunities to own a business; but often service jobs do not pay as well as jobs in manufacturing and construction.

Apprenticeship Outcomes

There has been very little systematic study of the effects of apprenticeships on workers, and the studies that do exist are sometimes questionable. I base the following observations on reports from the Department of Labor, the National Center for Research in Vocational Education, the Carnegie Council on Policy Studies in Higher Education, and a survey conducted by the Associated General Contractors of America.

The studies suggest that apprenticeship training gives construction craftsmen considerable advantage over those trained by informal means. Apprenticeship graduates are better educated, learn their trades faster, work more steadily, and are more likely to be supervisors than nonapprenticed craft workers. The studies report that apprenticeship systems produce better skilled, more productive, and safer craft workers. Apprenticeship graduates are better paid. They experience fewer and briefer periods of unemployment. Employers often specifically request workers with apprentice training.

Trends in Apprenticeship Programs

In this section I review some of the major changes occurring in apprenticeship programs.

Preparatory Courses and Prejob Programs. Many high schools and technical schools have introduced apprenticeship preparatory courses to attract able young people during the years they are making career decisions. The goal of the preparatory programs is to acquaint young people with opportunities in crafts and trades and to provide them with theoretical and technical instruction in specific fields.

A young woman who works as a medical secretary in a hospital and is taking apprenticeship carpentry courses on the side told us: "I might have been a carpenter if I would have had the exposure in school and found how much I enjoyed it instead of discovering that when it's too late." She probably would have enjoyed an apprenticeship preparatory course in carpentry while in high school.

The Bureau of Apprenticeship and Training has encouraged six- to eight-week prejob programs that introduce potential apprentices to skilled trades and determine their suitability for the work. Students who successfully complete the introductory program may enter regular apprenticeship programs. Special programs are designed to reach minority groups and prepare them to successfully compete for the limited apprenticeship openings.

Expansion. There is also a trend toward increased participation by minority and female apprentices. As a result of the civil rights movement the percentage of members of minority groups among registered apprentices has multiplied since the late 1960s. Today, half of all apprenticeable occupations include women, a substantial change over the situation a few years earlier. Both the number of occupations in which women are apprentices and the percentage of apprentices who are women are rising.

Traditionally, apprenticeship programs focused on skilled trade occupations related to building and metal trades. These depend on construction and manufacturing, and they are vulnerable to the economic instabilities of the industries. In recent years apprenticeship programs extended to new occupations including legal secretaries, lens grinders, dental and orthodontic appliance makers, prosthetic fitters, and environmental control occupations.

There is a trend toward increased flexibility in the time period required for completing apprenticeships. Increasingly, joint apprenticeship committees are giving advanced placement for past training and work experience.

Other Developments. In 1975 the Department of Labor accepted national apprenticeship standards for training military personnel. As a result, registered apprentice service personnel may receive credit for training and for meeting the requirements for journey worker status in recognized civilian apprenticeable occupations.

Two-year colleges increasingly provide classroom training required under apprenticeship regulations. According to a national survey conducted by the American Association of Community and Junior Colleges, community colleges and junior colleges offer more than 1,200 apprenticeship training programs and increasingly offer associate degrees to apprentices.

Information Sources

The Occupational Outlook Handbook gives general information about apprenticeship programs for several occupations in the sections titled "Training, Other Qualifications, and Advancement." This is the best place to begin when seeking information about apprenticeships for specific occupations. The Bureau of Apprenticeship and Training provides information and services to individuals, unions, and employers, and this is another good source for information. Call or write the nearest office of the Bureau of Apprenticeship and Training or Apprenticeship Information Center. The Bureau is listed in the telephone directory under United States Government–Department of Labor.

If your son or daughter is thinking of a specific occupation, contact the local union office or a large company that employs workers in that occupation. These sources can help you contact the apprenticeship committee that has information on qualifications and application procedures. Once you make contact with the apprenticeship committee, it will be necessary for you to stay in touch and get regular updates on openings and application timetables.

Apprenticeships are highly structured. They are long-term training programs designed to teach the levels of skill required in specific occupations. A second way, a less structured way, to earn while learning falls under the general category of training and education programs in industry. That is the subject of the next section.

Industry Training and Education Programs

Participation in work-related training has been increasing at a steady rate. That is due to requirements in the work place to upgrade and update workers' occupational skills. Industry training and education programs have also appealed to people who are skeptical about the value of a college education. For example, a welder insists that young people should have more vocational training: "Train them for the real world," he told us, "not some fantasy where everybody goes to college and lives happily ever after." Similarly, a sales manager in Colorado said: "Too many dream of glamorous jobs such as doctor, lawyer, or airline stewardess where competition runs high as does the expense and years of training. It's not important what job you do, but how well you do it that gives you satisfaction."

There are two different types of employer sponsored programs: on-the-job training and educational programs. On-the-job training programs are designed to improve workers' skills to perform a specific job. On-the-job training is almost always conducted in-house by company employees, on company time, for the purpose of training new workers or upgrading current workers' skills. Educational programs may occur during or after work hours and are usually provided by the company. Sometimes educational programs incorporate external resources including local college or technical school instructors and facilities. Another form of industry education programs is company tuition-aid plans that provide employees with partial or complete reimbursement for college courses taken after working hours.

Published information on the extent and effectiveness of industry education and training programs is sparse. In part that is because there is much variation in employer sponsored programs. Variation in industry sponsored education and training programs comes both from the requirements of the occupation and the characteristics of the company in which workers are employed. Organizations with fewer than fifty employees are much less likely to offer structured training programs than are larger organizations.

On-the-Job Training

Firms normally give new workers some kind of initial orientation to the work and performance standards of the jobs for which they were hired. In many cases the orientation is informal and unstructured, simply showing new employees what to do, then turning them loose except for ongoing supervision.

On-the-job training programs are more structured and last longer than orientation sessions. Acceptance into on-the-job training programs may require a high school diploma or, in the case of advanced programs, may require evidence of completion of related training in a two-year college or technical school. Programs may enroll only company trainees, which means it is necessary to work for the company in an entry-level position to qualify for a training program. Length of training may vary from a few days to several weeks; and most training is "hands-on" with company instructors or experienced workers providing the instruction, though some occupations require additional classroom instruction. Some companies train workers for a specific job with little possibility for advancement. Others provide training and encouragement for workers to advance according to their interests and abilities.

On-the-job training programs are offered most often in the fields of health occupations and secretarial work, insurance, telephone communications, computer programming, and banking. They serve an important function in industry, as an artist for an advertising agency observed: "There is too much pressure and importance put on college. The trade schools and actual on-the-job working with people is equally if not more important."

Education Programs

The 1981 Adult Education Participation Survey defined adult education as all part-time instruction, excluding courses taken by full-time students in programs leading to a high school diploma or academic degree, and vocational preparation programs of six months or longer duration. Educational institutions provided half of all adult education programs. Industry, labor groups, and professional associations provided another fifth. The employer was a source of funding, in full or part, for almost a third of all adult education courses.

The courses taken ranged from hobby and recreational activities to highly technical training. Nearly half were in three areas: business, health, and engineering. Sixty percent of all adult education was taken for job-related reasons, primarily to advance the participant in his or her current job. Over three-fourths of adult education participants worked part- or full-time while they attended classes.

The National Center for Education Statistics indicated that nearly four million young people between the ages of seventeen and twenty-four participated in adult education activities. Over a third of all adults with less than a four-year college degree enrolled in some form of adult education.

Advantages and Disadvantages

Like other career preparation options, industry education and training programs offer young people both advantages and disadvantages. The primary advantage is that education and training programs provide job experience and earnings while a young person learns a specific skill. Some companies have well-organized training programs that provide a career ladder for people who take advantage of the programs and improve their skills and abilities.

One of the ways parents can help their young people is by helping them think through the pros and cons of whatever form of career preparation they choose.

There are also disadvantages, and these too should be noted. The main disadvantage is that training specific to one company may not be accepted as qualification for a similar job in another company. On-the-job training does not offer the same portability as a college degree, certificate, or apprenticeship credentials. One of the ways parents can help their young people is by helping them think through the pros and cons of whatever form of career preparation they choose. A plumber's wife who works as a practical nurse in a doctor's office put it this way: "I will not push my children (I have 3) to go to college. I want them to do the best they can and will do all I can to help them pursue what interests them. If a certain field interests them, I will help them see the pros and cons of that field so they know what to expect so as not to be shocked later if they enter that field."

Information

The primary sources of information about industry education and training are the companies that offer the programs. There are three ways to identify companies with programs in occupational areas that may interest a young person:

> The local office of the state Job Service can usually provide names of companies with programs in particular areas. It is best to go to the Job Service office and talk face-to-face with a counselor to get the necessary information.
>
> School personnel–high school guidance counselors, counselors in local two-year colleges or technical schools, high school or college instructors who teach classes in areas of interest–are in a good position to suggest local companies that offer education and training programs.
>
> Large companies in the region are the most likely to have education and training programs. Company personnel can provide that information.

The more that young people invest in themselves, the greater the long-term return is likely to be.

Like other more involved forms of career preparation, industry education and training programs offer young people a way to invest in themselves, to learn while they earn. At the same time, investing in industry education and training may be like investing the minimum during a period (early career) of exceptionally good investment opportunities. Investing something is better than nothing, but the career preparation years occur once in a lifetime. The more that young people invest in themselves, the greater the long-term return is likely to be.

There is no way to know in advance whether a particular training or education program will offer a career advantage, but there is a principle young people would do well to follow: They should invest in themselves, take advantage of every opportunity to learn while they earn. Finally, young people should realize that there are many different ways to find meaning and satisfaction in work. A civil engineer in Hawaii shared his experience: "I was encouraged to believe a college education was essential to be a 'successful' person. I don't believe this is true for everyone. Being a success just to be looked up to is bunk. If one is satisfied and happy, I think he is a success to himself and that's really all that matters."

Federal Civil Service

Government service offers career preparation opportunities that young people often overlook. But consider the following:

> The federal government is charged by public law and executive order to provide training for government employees to enhance their careers.
>
> The government offers training programs for new employees that are designed to bring employees to their full productive and earning capacity as rapidly as possible.
>
> The government has executive training programs specifically designed to recruit college students and develop them as top executives.
>
> All of the large federal departments and agencies operate their own continuing training and development programs.

These training programs, coupled with the fact that the federal government is the nation's largest single employer, make government service a unique opportunity from a career preparation point of view. Government service is one of the nation's largest industries. It employs one of every seven workers in the labor force. State and local governments employ the majority, about five out of six government workers.

The federal government employs about 3 million people of which about 2.5 million are full-time. One of four federal employees works in an administrative or clerical position. Every year a half million new workers replace employees who retire, die, or leave government service. One-fifth of the newly hired are young, recent college graduates hired for entry-level positions. Thousands of other young people, mostly under age thirty, move into government after experience in private business and industry.

Opportunities in Government Branches

The federal government is organized in three major branches. The legislative branch includes Congress, the Library of Congress, the government printing office, and the congressional budget office. The judicial branch includes the Supreme Court and the federal judicial center. Only eighteen thousand people work for the judicial branch, and forty thousand work for the legislative branch. There is keen competition for positions in these branches, and employment opportunities are limited.

The executive branch is the largest of the three. It includes the president, executive office of the president, office of the vice president, thirteen cabinet departments, fifty agencies, eighty committees and commissions, and thirty international organizations. Two-thirds of all federal employees work for the thirteen cabinet departments and another third work for the six largest agencies.

The Department of Defense is, by far, the largest federal employer. It employs more than a million civilians, a third of all federal workers. Other major employers are the U.S. Postal Service, the Veterans Administration, the Department of Health and Human Services, and the Departments of the Treasury and Agriculture.

Almost every career that exists in the private sector also exists in the federal government.

Almost every career that exists in the private sector also exists in the federal government. In addition, government offers opportunities in such unique careers as printing money, maintaining national defense, and establishing international relations.

Twelve percent of federal government jobs are located in the greater Washington, D.C., area with the rest scattered throughout the United States and its territories. Only one of twenty are situated outside United States boundaries.

At the present time occupations in scientific and technical fields offer most opportunities for college graduates. Promising occupational specialties include engineering, physical science, health career, and biological science. Good opportunities also exist in the business-related fields of economics, finance, labor management, and accounting.

Application Procedures

Vacancies in the federal civil service are filled by open competition, promotion from within, reassignment, transfer, or reinstatement of a former employee. Nearly two-thirds of all federal civilian jobs are competitive–that is, applicants are evaluated, ranked, and employed on the basis of merit. The Office of Personnel Management recruits, tests, and evaluates new employees for most government agencies, and for most federal jobs.

In order to appear on the Office of Personnel Management referral list, applicants must contact a federal Personnel Management office to determine whether applications are being accepted in fields that interest the applicant. These are listed in the telephone directory under United States Government, Personnel Management. Applications are accepted based on the number of openings agencies estimate they will have in various locations over a period of time. If there are openings, persons may apply through the Office of Personnel Management.

Evaluation Procedures

Office of Personnel Management examiners evaluate applications to identify people who qualify for particular positions. Applicants' qualification ratings are based on a written test score or work experience, education, and training. The criterion for rating depends on the position. If qualified, the name of the applicant is entered on a list with the names of other qualified candidates.

When a vacancy in a government agency appears, the agency requests the names of qualified candidates, and usually the Office of Personnel Management refers the top three qualified candidates to the hiring agency. Applicants who are not selected continue on the referral list until they are either hired, their eligibility expires, or the list is terminated.

Most federal jobs do not require that candidates take a written test, though some–for example, general and social administration positions–require a written test. The Professional and Administrative Career Examination (PACE) is the written test used most widely for federal civil service. PACE covers applicants' verbal and quantitative abilities and is the principal screening mechanism for filling entry-level positions for college graduates. Persons planning to take PACE may wish to consult some of the commercially available review workbooks that are available in bookstores and in some career centers.

A high score on the examination opens a long list of entry-level positions to young people, regardless of their undergraduate major. Students may qualify for federal jobs that require specific college course work even though they do not have a degree in that field. For example, a student does not need a degree in economics to work as an economist. Anyone who meets the minimal requirements may qualify. People who do not hold a college degree may qualify for some professional jobs on the basis of work experience, though it is difficult to obtain a position on this basis. Qualification for entry-level positions typically require:

Six months of work experience

A high school diploma

Up to two years of college, vocational training, or specialized work experience

Combinations of education and experience

Qualifications for manual jobs are based on skill levels rather than on education or experience. Skill level is assessed in a variety of ways including written or performance tests, school records, and work histories.

Job Classifications

The federal government classifies jobs by grade level. Job difficulty and responsibility are the bases for assigning grade level: the higher the grade level, the greater the difficulty and responsibility. Salaries correspond to grade levels.

Several pay systems cover different jobs, but the General Schedule (GS) applies to two-thirds of all federal jobs. Under the General Schedule, positions range from GS-1 to GS-18. Clerical workers generally begin at GS-1, 2, or 3; guards at GS-4, and white-collar workers with experience or education at GS-5. Executives hold the upper GS levels.

Another pay system is the Wage System, which covers another fifth of federal workers. The Wage System has fifteen levels and includes manual positions. Unlike the General Schedule, which is uniform worldwide, the Wage System pay rates vary by type of work and work site locations.

Civil Service Advantages

Federal civil service offers extraordinary training opportunities, and there are other advantages. Almost without exception federal agencies provide lifetime employment and associated privileges that young people can rarely match in the private sector.

In 1962, Congress passed the Federal Salary Reform Act that provided substantial pay increases and established the policy that annual compensation for government employees should be comparable to that of private employees for work at the same level of difficulty and responsibility. Pay increases have been regular and predictable over the last thirty years. Raises occur in October, and they are based on the Department of Labor's cost of living index.

The federal government's retirement system has been one of the best features of its employment package. It provides a measure of income protection for disability, death, and retirement. Annuity is computed on length of service and on the highest average basic pay earned during three consecutive years of service. Other outstanding benefits are sick leave, health insurance, cost of living allowance for certain geographical areas, mobility, paid holidays, severance pay, and unemployment compensation.

Government employment also offers unparalleled job security. The federal government is as permanent an organization as exists anywhere. That is not to deny RIF (reduction in force) notices that have occurred in recent years. Nonetheless, the federal government is not going out of business and it is not about to merge with another corporation.

Civil Service Disadvantages

There are also drawbacks to federal employment, and these, too, should be considered. Though federal salaries are competitive, the government cannot match private-sector salaries for occupations in high demand, such as high-level executives. The federal government is not the place to "strike it rich," and federal employment is not the place for the young person who wants to be self-employed or to own a business.

Also, federal employment may not be the place to be if a person has strong political or partisan ideals. Federal employees are forbidden to strike and must sign an oath stating that they will not strike, as evidenced in the 1981 air traffic controllers' strike. According to the Hatch Act of 1939, most federal employees cannot take an active part in partisan political campaigns.

Some federal jobs involve health hazards. The radioactive exposure from the Three Mile Island incident is one example. Civilian employees may lose their lives as occurred in Vietnam, Iran, and Lebanon. FBI and CIA agents face possible injury and death in carrying out special assignments.

The federal government is an extremely large and complex organization. Regulations and red tape are ways of doing business, and delays in work schedules and personal frustrations are commonplace. Maybe it shouldn't be that way, but that's the way it is. The snail's pace may be particularly annoying to activists and the young.

Government employment will probably grow more slowly than the average rate of growth for all industries through the year 2000. Public concern about rising taxes is restraining government spending and slowing growth in employment. Federal agencies are reducing staffs as some regulating functions are abolished and other administrative responsibilities are transferred to state and local governments. The Gramm-Rudman Bill is forcing other limits and reductions.

The Outlook

There will be some new jobs and there will be openings to replace federal employees who leave government service, retire, or die. Opportunities will occur in occupations where employment is relatively stable as well as in those in which employment is rising. There will always be room for competent young people, though competition will continue to be intense as we look toward the year 2000. A major reason for the competition is the extraordinary career preparation opportunities offered by federal civil service employment.

Twelve

Occupational Training and Education in Military Service

About 300,000 young men and women will join the military services this year. Since the end of the draft and the advent of the all volunteer force, young people enter military service by choice. Whether military service is a bummer or the chance of a lifetime is, of course, a controversial issue. A Navy veteran who now works as a telephone lineman in the state of Washington told us: "In my opinion the military (I was in the Navy for six years) did twice as much in preparing me for the future as high school did." But an Air Force veteran, now an air traffic controller in Oregon, had a much different opinion. He said: "The demands of military service, especially family separations, precipitated divorce and disrupted my life for about eight years after high school."

Whether parents and young people are of the opinion that military service is a good deal, a bad deal, or whether they are open minded about it, there are good reasons to consider the implications of military service for young people's careers.

> About one out of ten American males serves in the armed forces; and opportunities for military service are increasingly open for females.
>
> The possibility of military service occurs at the same time that young people make other career decisions.
>
> The All Volunteer Force competes with industry, college, business, trade, and technical schools for recruits.
>
> Reserve Officers Training Corps (ROTC) and the Marine Corps Platoon Leaders Class (PLC) programs are closely integrated with college education and training programs.
>
> The All Volunteer Force presents itself to young people as an opportunity for occupational training.
>
> The All Volunteer Force also presents itself as a way to pay for education and training after military services is completed.

Given the differences in opinion about military service and the nature of the commitment–a signature on the dotted line may mean an eight year hitch and the risk of combat–it is wise to set aside the MASH and Hogan's Heroes view of the military and to consider a more factually based orientation to the opportunities and obligations in the modern military.

Unfortunately, neither of the two most popular sources of information, military recruiters and protest/anti-war/CO groups, has established itself as an evenhanded evaluator. I try to balance the pros and cons in the pages that follow. As a parent of three sons, I resent anyone trying to sell my sons any bill of goods whether that be a political or religious ideology, a used car, street-corner drugs, or anything else they have not thought through or, upon reflection, would not choose to do. At the same time, I want my children to sort out their options and take advantage of whatever opportunities there are that appeal to them. My guess is that most parents feel pretty much the same.

I emphasize two themes for parents and young people considering military service. The same themes apply to all career decisions. First, just as choosing additional schooling is a choice for a much different lifestyle than is, say, choosing full-time work after high school, so military service involves choosing a much different lifestyle. The single most important characteristic of military service is that once you sign on the dotted line, you have signed away a substantial amount of control over your life. Second, as with any other career decision, there is information available and you need to check it out.

In the pages that follow I try to balance the pros and the cons. I describe how the modern military and its major branches are different from Dad's or Uncle's days in the military. I describe what military service offers young people by way of recruitment incentives. Finally, I raise a number of critical questions that young people who are considering military service should think and talk through with their parents. I develop these in more detail in the Career Explorations Workbook.

Parents should not assume that young people know all there is to know about military possibilities, or that young people know how to sort through the options. Young people have the same Hollywood version of the military as they have of other occupational careers. A former postal clerk in the Navy told us what his major problem with the military service was since leaving high school. It was "what branch to go into and what field of training might help in getting a job once you get out." I offer the following information to parents and young people who want to examine the career implications of military service in more detail.

The Modern Military

As the labor force, educational opportunities and formal training programs have changed, so also the military has changed dramatically over the past two decades. Since 1973 the military has been an all volunteer force, and the modern military has had to adjust to the numbers, quality, and composition of the personnel that it is able to attract. It was a lot simpler for the military when Uncle Sam did the choosing.

A second major change occurred in 1976 when women were admitted to the service academies. Since then their numbers have increased in the officer corps and among enlisted personnel. Women are now eligible to enter most military specialties, all but those that involve combat duty.

A third major change is that the modern military relies on advanced weapons systems whose effectiveness hinges on a small number of highly trained and widely dispersed personnel and a large support service. Sophisticated and complex equipment requires more intelligent and better trained men and women to operate it. The new military leadership model requires skill in coordinating dispersed units and diverse weaponry. Instant communication and information processing is the glue that holds it all together. Computers will never replace soldiers in the trenches, but the military services are at the leading edge of the technological revolution.

Skilled personnel, sophisticated equipment, and instant communications characterize the modern military.

That doesn't mean that everybody in the military plays computer-war games, flies helicopters, or wears white lab coats while making technical adjustments on missile-guidance systems. The hot, noisy engine rooms in the bottoms of ships are still there, as are the jungle swamps to slosh through, and the desert stockades to guard. But today's armed services are different organizations than good old Dad or Uncle remembers from years gone by. Skilled personnel, sophisticated equipment, and instant communications characterize the modern military.

Because the military must compete successfully with higher education and the labor force for recruits, the military has had to upgrade the quality of life it offers. Today's military pay schedules are much more in line with pay scales in the civilian labor force. Also, the military has taken strides to integrate its occupations into the structure of the civilian labor force. A foremost example is that several forms of occupational training in the military now count towards apprentice training in the civilian labor force. The military has added other inducements like the buddy system, which allows friends to enlist together, and a variety of training options that, under the draft system, had been assignments.

Recruitment Themes

The military has responded to its change in status to an all volunteer force and its need to recruit successfully with a high-powered advertising recruitment campaign. The military spends millions per year in advertising that is geared to get young people thinking about military service as a career option. It employs the same advertising imagination that sells dog food, Toyotas, and lawn mowers on TV. The military services dramatize the breadth of job possibilities available to young people, and the advertisements feature young men and women having the time of their lives including plenty of coed volleyball on the beach and holiday weekends abroad.

The ads skillfully respond to the kinds of questions young people ask:

> How can I save enough money for college?
>
> How can I get out of this dead-end job?
>
> How can I meet guys or gals and have some fun?
>
> How can I learn skills that I need to get the kind of job I want?
>
> How can I get out of here–home, school, community?
>
> How can I get away from dad, mom, brother, sister, or a romance gone sour?

Military service offers an out for a lot of problems young people face. One of the problems they face is that no one wants to hire them. The daughter of a foreman for an aluminum manufacturer started out as an assembler in a plastic products company and held twelve different full-time jobs in as many years since leaving high school. Her comment was that "between the ages of eighteen and twenty-five it is difficult getting a job, as employers feel that this is a young and unstable age." A nurse, mother of two and married to an auto mechanic, explained the problem from the employer's point of view: "Many people do not like to hire kids in lots of cases. When looking for a job they always want someone who has had experience–and how can you have experience if people don't give you a chance?" Finally, a former Marine, now a journeyman in a ship building company, looked at the problem from a young person's point of view: "You can't get the job without experience and you can't get experience without the job. Seems like a Catch-22 type of thing." Military service solves these problems.

Military service gives young people an option. It gives them a group, an identity, even a slogan they can relate to:

Army: "Be all you can be."

Navy: "It's not just a job, it's an adventure."

Air Force: "Aim high."

Marine Corps: "We're looking for a few good men."

The military services consist of four major branches plus the Coast Guard and the National Guard. Each branch has its own mission and character. Each also has its own incentives, bonuses, and recruitment strategy.

Advantages of Military Service

Joining a military service can be the first step to a very satisfying and rewarding career. Whether a young person enters with the intent of making a career of it or as a stepping stone to something else, the military has a number of things to offer.

The military takes care of you. It provides the basics: a roof over your head, a bed or cot to sleep on, shirt and shoes, food to eat, and a place to hang out. There's a doctor to go to if you get sick, a dentist if you chip a tooth, a chaplain if you are so inclined, and things to do: pool, poker, bowling, and places to go. It isn't the Ramada Inn, but it is a home-of-sorts away from home. And you're on your own.

Occupational training is the number one sales pitch that comes through in the recruitment themes. The military is one of the nation's largest employers and it offers virtually every job that is available in the civilian labor force plus a number that aren't available such as adjusting atomic warheads, licenses to kill, submarine testers, and tank gun-turret repairers. The trucks, tanks, helicopters and ships all need someone to run and maintain them. The same is true of computers, radar screens, and potato peelers. Many military occupations require no previous experience or training. The military will teach you how, then pay you to do it.

In addition, military service can be the way to finance a college education either totally or in part. Service personnel can take courses as part of their regime and they may get veterans' education benefits after they are discharged. Those who have been to college and wish and qualify to go to graduate school, especially to medical school, may have all costs paid while they earn a salary. Occupational training is the military's primary recruitment theme. Education and benefits is the second.

A hitch in the military also involves an opportunity for young people to sort things out, to "get their act together," as the saying goes. It provides an opportunity to get away, to get some skills training, to meet new people, to travel, and to get a fresh start.

Military service also provides an opportunity to participate in a very honorable tradition, that of protecting the American people and defending the United States. This is a very necessary and worthy vocation and those who follow it have the rest of us in their debt.

Disadvantage of Military Service

Military service can also be the source of a lot of frustration and anxiety, as is true of all occupations. Military regimes can be confining. Joining the military means giving up a lot of control over your life.

Young people thinking about military service are well advised to remember that the number one purpose of the military is not to provide occupational training, is not to provide educational experiences and benefits, and is not to provide flight training in Cobra helicopters. Military service was not designed to be and it does not operate as a young person's welfare program, travel bureau, or holiday weekend service. The military offers a lot because it expects a lot in return: control over young people's lives. When push comes to shove, both in peacetime and in wartime, the decisions that are made are in the best interests of the military. What happens to a particular young person is a secondary consideration. Perhaps it needs to be said that you can get hurt in the military. You can die, as military cemeteries the world over remind us.

In an earlier chapter I noted that the TV cameras may show heroic athletic plays that end in broken bodies, but the producers are careful not to let the cameras dwell on blood and serious injury. Similarly, the military ads and brochures don't picture the wheelchairs, amputees, veterans hospitals, burials at sea, broken families and broken lives that are also part of the military scene. Military combat is a dirty business, and nobody asks for a recruits' opinion about a particular military order. Robert's Rules of Order is not the way of doing business. The recruit's assignment is to follow orders and that's what he or she agreed to do.

This doesn't just happen on the foreign battlefield. It starts with enlistment and boot camp. Someone else decides what your schedule is, what you do, how you do it, with whom you do it, how you act, what you say and don't say, where you live, what you eat, what clothing you wear, and what your schedule is–for starters.

One other thing: if you don't like it, you can't just process a drop/add card as you do in college. You can't just quit.

As with any career decision, there are costs and there are benefits to enlisting. There is information available. The sections that follow offer general information about military options and, more importantly, help identify critical issues that should be considered in choosing military service as a career or career preparation option. As with all career decisions, young people need to make the decision on the basis of the best information they can get.

Questions to Ask and Answer

I limit my focus to the career-preparation implications of military service. This is not to deny that young people are attracted to military service for other reasons: travel, adventure, need of a job, wanting to get away, sense of civic duty, and service to a higher cause. But occupational training and education possibilities are also features of the military that young people may want to consider.

I cannot go into all the details of the package each branch of the service has to offer. The details exceed the space for this chapter and they change from year to year. You will have to get the latest details from your local recruitment offices. There are a number of things I can cover in this chapter, however. I can give you a brief overview of military life. I can tell you, in general terms, what the incentive packages look like. And I can tell you what questions you need to ask yourself and others as you think through the possibility of occupational training and education in military service.

Active Duty or the Reserves

All branches of the services are structured into active and reserve duty components. Both components receive the same training, work with the same machinery and equipment, and are paid at the same rate. The big difference is how much time is spent on the job. Active duty means full-time work and full-time wages. Reserve duty means part-time work and part-time wages, or none at all depending on the branch of the service.

The military hitch is eight years, whether a person signs up as an enlistee or an officer. The time spent on active duty may range from two to eight years, depending on the military branch. Eight years minus the time on active duty is the amount of time a person will spend in the reserves.

Reserve time may be divided into Ready Reserve or Standby Reserve. The Ready Reserve are ready to be called to active duty. They train and are paid one weekend a month and 15 days during the year. The Standby Reserve have time left on their eight-year military obligation, but they are not in active training and they do not get paid. They can be called up if Congress declares war or if there is a national emergency.

There are two other reserve units. The National Guard is a special reserve force. It is available for domestic disasters or civil disorders. The National Guard reports to both the federal and state governments. The Retired Reserve have put in enough time to qualify them for retirement benefits. They are no longer paid.

Pros and Cons of the Reserves. The biggest advantage of reserve duty is the money it pays together with the associated benefits. It's like having a second job. It pays a couple hundred dollars a month and includes benefits: low-cost life insurance, eligibility to buy things at low-cost military stores, recreational privileges at military installations, and such veterans' benefits as low-cost mortgages and retirement programs. The reserves also offer occupational training, which a young person can learn in conjunction with running a civilian business. Financial benefits for a college education are available to members of the reserves.

There are some disadvantages to being a member of the reserves. One is that if you are in the active reserves, you have no guarantee that you can stay at home. There is no guarantee that the amount of time will be limited to a weekend a month plus 15 days a year. If your reserve unit is activated, then you are activated too--no "ifs," "ands," or "buts" about it. You have to go.

Another disadvantage may be time away from work. Military obligations can interupt company time at critical periods. A civilian employer may have to rely on somebody else to be absolutely certain that a big project gets done; and, of course, the outside obligation can show up in the paycheck and at times for promotions. Likewise, monthly weekends and 15-day stints away from home will conflict with birthdays, anniversaries, family reunions, neighborhood get-togethers, school events, church events, and a whole host of other things. It can be inconvenient.

Officer or Enlisted Person

Another choice a young person thinking about a military career might make is whether to enter as an enlisted person or an officer. Obviously, going in as an officer means more money and more rank, but the choice isn't simple. The basic question is whether the young person sees military service as a short- or long-term commitment.

A short-term commitment means that a young person goes in to get occupational training or to get money for college. A long-term commitment means that you are thinking about making the military a career.

Each branch of the service has it's own package to offer, and young people thinking about military service should get the latest information from recruitment offices. There are, however, similarities across the services in the officers and enlisted members of the services.

An officer in a military service functions like the manager of a corporation in the private sector. Officers in the military are well educated, highly trained, and enjoy special benefits. More than 90 percent of them are college graduates and, therefore, they are the most likely to have access to such special education/training programs as graduate school or management training.

Military Rank and Pay. The military ranks officers by number. Thus, in the Army, Air Force and Marines, a second lieutenant ranks 0-1, and a general ranks 0-10. In the Navy and Coast Guard, which use different titles, an Ensign ranks 0-1 and an Admiral ranks 0-10. A 0-1 officer, regardless of branch of service, is currently paid $16,056 per year whereas a 0-10 four-star general or admiral is paid $68,520 per year. Additional pay may be awarded for hazardous duty, sea duty, or flight duty. Other benefits may include non-taxable allowances for food, lodging, travel, other military expenses and reenlistment bonuses. All officers receive a 30-day paid vacation benefit.

An enlisted person is equivalent to an hourly worker or supervisor in the private sector. The military branches have different names for the ranks: "private" in the Army and Marine Corps, "airman" in the Air Force, and "seaman recruit" in the Navy. The Pentagon ranks enlisted personnel from E-1, lowest, to E-9, highest.

Most enlisted personnel begin at E-1, though those with special skills or some college may enter at E-2 or E-3. Promotion from E-1 to E-2 usually occurs by the end of six-months, promotion to E-3 by the end of the first year, and promotion to E-4 at the end of one-and-one half to two years. Thereafter, promotions are based on military branch needs, job performance, test performance, and the commanding officer's recommendation.

Pay for enlisted personnel is based on rank, length of time in service, and type of duty. Thus, people on hazardous duty or sea duty may receive additional pay. Currently, E-1 personnel are paid $7,752 per year whereas E-10 personnel may make $25,152 per year. In addition, nontaxable allowances are made for food, uniforms, and housing. Enlisted personnel also receive 30-days of vacation per year.

Enlistment Packages

Since the end of the military draft, the armed services have had to recruit to maintain their personnel quotas. In order to compete successfully, the services have come up with a number of benefit packages to attract young people. Because the services are in competition with each other, they are constantly modifying the incentives: phasing in new programs, phasing out old programs, increasing benefits, offering more alternatives, and the like. I don't try to review all the recruitment options here–only the ones that relate most immediately to careers and career preparation.

There are three steps to enlisting in the military: taking an aptitude test, talking through your options with a recruiter, and going through a military processing station.

The Armed Services Vocational Aptitude Battery

The military services use a special aptitude test called the Armed Services Vocational Aptitude Battery (ASVAB). This test is somewhat similar to college entrance exams such as the ACT and the SAT, but the ASVAB focuses more on vocational aptitudes and less on intellectual abilities. The military uses the ASVAB to identify which jobs and how many jobs in the military will match a person's interests and abilities. A recruit's score on the ASVAB is very important to his or her future in the military, which means two things:

> It is important for a young person to do well on the ASVAB.
>
> Take the ASVAB before visiting a recruiter. A young person should take the outcome into account in deciding whether or not to enter the military services. Don't make the decision to enter first and then use the ASVAB to decide what you will do after you get in.

Many high schools offer the ASVAB. It need not be taken at a recruitment station. The ASVAB is a multiple-choice test that covers 10 different subject areas and has a total of 334 multiple-choice questions. It takes about two and one-half hours to complete the test. The test is constructed as follows:

Subject	Number of Questions	Minutes Allowed
General Science	25	11
Arithmetic Reasoning	30	36
Word Knowledge	35	11
Paragraph Comprehension	15	13
Numerical Operations	50	3
Speed	84	7
Auto and Shop Information	25	11
Mathematics Knowledge	25	24
Mechanical Comprehension	25	19
Electronics Information	20	9
Totals	334	2 hrs. 24 min.

If a young person is thinking of taking the ASVAB, then follow these suggestions. Take the ASVAB at least a day or two–preferably several days–before meeting with a military recruiter. This will give time to think about the results and to decide what to talk to the recruiter about.

Two additional pieces of information may be useful. One is the ASVAB Information Pamphlet that describes the test and includes sample test questions. These are available at most career centers. Otherwise, check at your local recruitment office. Another useful pamphlet is an ASVAB practice book. It will provide sample questions and practice at taking the test. Practice books are available in bookstores and sometimes in libraries.

After taking the ASVAB, a young person should examine the scores before going to the Processing Station. Ask a high school career counselor for a copy of the *Military Career Guide*, which is available in all high schools. This book describes jobs in the military and explains what ASVAB scores are needed in order to qualify for the jobs. Young people should speak with their career counselors and parents about the match between their aptitudes and their scores and think about the questions they want to ask a military recruiter.

Visit a Service Recruiter

Many young people are understandably cautious about setting foot inside a recruitment office. It occurs to them that the door might blow shut and lock behind them, they might accidentally sign something, their hair might get chopped off and they get stuck on a bus headed for boot camp–and nobody will ever know what happened to them.

That is not likely to happen. It isn't likely because the military cannot afford to drag young people kicking and screaming into service against their will. It is in everyone's best interest–the military's, the recruiter's, the young person's, and parents'–that young people enter the military only if they and the military seem to be a good match. The military is not a dumping ground. As military equipment has become more sophisticated, it takes more intelligent and better qualified young people to make the grade. A fair amount of a recruiter's time is spent discouraging young people who won't make the grade.

This is not to suggest that recruiters aren't interested in potential enlistees. Of course they are. They may have a quota to meet. They have a job to do, and that involves getting signatures on the dotted line. But remember that today's military services are highly specialized. Recruiters are not looking for just "any ole signature."

Recruiters are skilled at what they do. They make a good impression. They are attractive and well groomed. Their military uniforms fit well and their shoes shine. Their ribbons and medals are colorful and impressive. Recruiters have self confidence, a friendly smile, and a cabinet full of just the right video tapes that leave an impression. Most recruiters are in the military because they like it. They have already reenlisted. Like all good sales people, they will emphasize the positive features of the military and will probably ignore negative aspects.

A recruiter can be a valuable resource for a young person who has specific questions in mind. The recruiter will have his or her own topics to cover. Basically, these are to make an assessment of whether the young person is really a prospective recruit. The recruiter will tactfully steer the conversation into a number of areas. What were the young person's interests in school and how well did he or she perform academically. Illnesses? Brushes with the law? Drug use? Jobs of interest? The recruiter may suggest taking a short screening test or a practice version of the ASVAB. And you can be sure that the recruiter will establish whether or not the young person is 18 years old. If not, the whole process will come to a screeching halt until parent permission is furnished.

If the young person continues to be interested and the recruiter judges that the young person is a potential recruit, the next step is to schedule an appointment at a Military Entrance Processing Station, which the recruiter will arrange. The recruit should be sure that all questions have been answered. One way to make sure that the right questions have been asked and satisfactorily answered is to take someone along to the sessions with the recruiter, a parent or friend. Another way to make sure that necessary information is given is to make several trips to the recruiter. Get information, think about it, talk to other people about it, and then head back to speak with the recruiter again. Have the recruiter schedule the appointment at the Military Processing Station when, and only when, the young person is ready.

Take your time in all of this. There is no hurry–other than youthful impatience.

The Military Entrance Processing Station

The Military Processing Station is where the real details are worked out, final agreements are made, and signatures go on the dotted line.

To begin with, the people in uniform will give careful attention to whether the requirements for getting into service are met. A liaison officer will check through the recruit's paperwork. The recruiter will specify in advance what the recruit needs to bring along. That will certainly include a Social Security card and two other pieces of identification, contact lens prescription if contacts are worn, medical documents as indicated by the recruiter, ASVAB test scores if the test has been taken, and the like. Assuming these materials are in good order, the next step is the physical examination.

Although the general requirements are much the same across the services, each branch of the military and units within the branches have special requirements or restrictions. Thus, although the maximum height accepted is 6 feet and 6 inches, it is unlikely that recruits that tall will end up in Army tanks, Air Force fighter jets, or Navy submarines. Conditions that can keep a young person out of the military go beyond low ASVAB scores and height and weight requirements to include such "innocent" conditions as braces on the teeth, wool allergies, and bee sting reactions. Before the process continues, the young recruit must pass the physical.

Choosing a Military Job

If the recruit passes the physical exam, military interest in the recruit intensifies.

It is important to recognize that if the paperwork is in good order and the physical exam has been passed, most of the concerns that the military has about the recruit have been satisfied. But that does not mean that the recruit's interests have been satisfied, and there can be a lot of momentum at that point to just get the enlistment business over with. At this point, recruits need to remember two things. First, from the recruit's point of view the most important things, like job assignment and enlistment benefits package, are yet to be decided. Second, the recruit hasn't yet signed or enlisted and it is perfectly appropriate to head back home. Recruits should take their jolly-good time making sure they get what they want. They are making an eight year commitment!

A job classifier works with recruits to help them decide what field they will enter. Of the hundreds of jobs in the military, those open to a particular recruit will be determined by ASVAB scores. The recruit will have to choose a military specialty, and the classifier will use a computer to determine when the next job opening in that specialty will be posted and whether the recruit's training will be completed in time to fill the open position.

It is not unusual for recruits to have to wait, perhaps for a year, for a job in their chosen specialty to open. When that happens, recruits may feel self-imposed pressure to choose another specialty–something else, anything–that will enable them to enlist immediately and to get on with it. The job classifier, who wants to keep the line moving and may be of a mind to spend no more than 30 minutes per recruit, may encourage an "it really doesn't matter that much" attitude. This is a critical point in the enlistment process. Recruits need to remember that they will live with the specialty they choose for four to six years. Recruits shouldn't allow themselves to be stampeded into anything. Keeping the line moving is not their problem. They are not in the military and nobody can order them around at this point. They have options other than to sign on the dotted line for a specialty that is not their choice.

Recruits have three options if the job they want isn't immediately available or if their ASVAB scores are too low in their preferred specialty:

> The recruit can ask for a waiver, a request for special permission to take the job even though the formal requirement isn't met. The Commander of the Processing Station is authorized to grant waivers and the recruit should not be reluctant to go to the Commander and ask for a waiver.
>
> The recruit can return home and wait. The military job situation changes day by day. So do the entry level qualifying scores that recruits must meet. It all depends on supply and demand in the military labor market. The recruit can ask the job classifier to make contact if the job situation changes.
>
> The recruit can return home and talk to the local recruiter. The recruiter's job is to match the recruit with the military. The recruiter can monitor the job situation and inform the recruit when things change.

At different points in this chapter I have encouraged recruits to go back home if they don't get what they want. That is their right and it is the wisest thing to do if they are not compeltely satisfied with the package the military offers them. There is little if anything to be lost by doing so. Their physical exam is good for 30 days–and what if they had to take it again sometime later? They passed it the first time. There is little reason to believe they wouldn't pass it the second time. The point I make is that the recruit should hold out for the job that interests him or her. That's how to make an intelligent and responsible military career decision.

Suppose, however, that the job that interests the recruit is available. Then, especially, the job classifier may want to get the file closed and keep the line moving. I strongly urge, however, that the recruit make sure that he or she has answers to these questions before signing:

> If I choose this option, how long must I stay in the military?
>
> Are there any other tests I must pass or requirements I must meet in order to get this job? If there are, and I don't pass them, then what happens?
>
> Is special training required for this job? What happens if I don't complete the training satisfactorily?
>
> If I take this job, do I have a choice of where I will be stationed? What are the probable places I will be stationed? How long am I likely to stay there?
>
> If I take the job under the buddy plan–i.e., I sign up with a friend–how long can the two of us stay together?
>
> If for some reason this job turns out not to be available, then what happens?

Advanced planning, knowing what questions the recruit needs to ask, will help move the process along.

Assuming that the military and the recruit can agree on a job and date to enter military service, the nuts and bolts of the enlistment process have been completed. There are other details to take care of, and all of the paperwork will have to be double checked; but the oath of enlistment has not been administered, and that means there is still time to call timeout and think about it for a few days, weeks, even months.

"It isn't over til it's over," Don Meredith was fond of saying as an announcer on Monday night football. That is true of the enlistment process too. It isn't over until the recruit signs the dotted line and takes the oath of enlistment. It's over when the recruit raises his or her right hand and repeats the following:

> I do solemnly swear that I will support and defend the Constitution of the United States against all enemies, foreign and domestic; that I will bear true faith and allegiance to the same; and that I will obey the orders of the President of the United States and the orders of the officers appointed over me, according to regulations and the Uniform Code of Military Justice. So help me God.

The Military and Careers

Employment in the military offers some people many of the same advantages as nonmilitary government employment. A stock clerk in the Navy told us his experience: "When I got out of the Army in 1971 there were no jobs available . . . so I went to college. In sheer desperation I joined the Navy in 1973 where I have been ever since. Although I don't like being in the service (because I feel there is a stigma attached), I like the job security." Especially career officers, if competent, enjoy a high degree of job security and possibly rank and status well into middle age.

Also, the military may provide an extraordinary opportunity for administrative and general management experience. The military is a large and tightly structured bureaucracy, and people who work their way up through the ranks gain firsthand complex organization experience from many different angles. They receive on-the-job training and hands-on experience in management and administration that has broad nonmilitary applications. First careers in the military have been important stepping-stones for high-level civilian administrative positions in industry, government, and education.

But what about the noncareer recruit? The military services are working very hard to equip young people with skills and to ease their transition back into the civilian labor force. For example, the services have structured apprenticeship programs into Army, Navy, and Marine training programs by agreement with the Department of Labor. Occupations that closely correspond to civilian occupations are registered. These programs assure that service people receive apprenticeship accreditation that can be logged toward civilian journeyman status. Individuals participating record their hours of training and work assignments in a logbook that documents their experience and can be presented later to an employer, labor union, or joint apprenticeship committee when they apply for a civilian job. Upon completion of the program, the Department of Labor issues a Certificate of Completion of Apprenticeship. Completion usually requires a second term of enlistment, but the log book can be a valuable credit on the civilian market for those who do not reenlist.

There are also examples of non-apprenticeable technical training learned in the military that is transferable to civilian occupations. Certainly that is true of such specialties as commercial air pilots who are able to accumulate experience and log flying time in the military. It may also be true of communications systems, computing technology, and clerical work.

In their monograph, *Employment and Training Programs for Youth*, Mangum and Walsh state: "Ninety percent of the training is related to civilian occupations, whether or not the individual chooses to or has an opportunity to pursue a related occupation." That statement is at the center of a major controversy regarding military service as a career preparation option. I cannot resolve the conflict here, but I can summarize four basic criticisms of occupational training in the military, then let parents and young people decide for themselves.

Criticisms of Occupational Training in the Military

There continues to be widespread disillusionment over military service, and military education and training appears to be a major sore point. In hearings before the Senate Subcommittee of Manpower and Personnel of the Committee on Armed Services, Jerry Reed suggested that accessibility to military education programs is a major problem. Reed testified that 80 percent of the first-term enlisted personnel stationed overseas that he interviewed sought a college education in the military, but only 5 percent had been able to take college courses. Reed states that 90 percent of military personnel who applied for college course work were repeatedly turned down by their unit commanders. Similar comments were made by soldiers who wanted to finish their high school requirements for a diploma.

A second criticism is that where education or training is offered, enlistees are not able to take the courses they want. This criticism can be stated simply. Even if Mangum and Walsh are correct that the military offers nine hundred specialized skill courses, the reality is that no ship at sea or remote outpost on land can offer more than a small fraction of the total number of specialized skill courses; and the courses offered are the result of military need, not individual preference. Job duties are changed on the basis of service requirements, not personal preference.

A third criticism is the military's option, some would say "tendency", to assign personnel to jobs other than those for which it trained the recruits. The military guarantees education and training, but it does not guarantee a job and experience in the same area that the recruit was trained.

A fourth criticism is that skill training may not transfer to civilian occupations. A Navy veteran who now works as a pipe fitter for a gas and steam supply system but wants to be an elementary school teacher told us his experience: "After graduation I went into the service and was trained in a field with no civilian counterpart. After leaving the service I had no training, and even though a veteran, was given no opportunity in the field I wanted to follow." A radio/TV repairman told a similary story: "I completed four and one-half years in the Navy as an aviation electronics technician. I was discharged with the knowledge and confidence that I was well-trained and with work experience in the electronics field. I had difficulty getting a job. I was told by more than one potential employer that the credentials that I produced showing my training experience just wasn't important." Another Navy veteran who now works as a surveyor for state government told us his experience: "I had four years as an equipment operator but only military. Everywhere that I sought employment I was told I did not have enough experience. It didn't make any difference that I had the training in the construction field; the employers always seemed to tell me that they wanted someone that had gained their experience in the civilian world. Therefore, the first 4 years I had to be satisfied with part time jobs or jobs completely foreign to what I'd been trained to do."

Every year thousands of recruits receive extensive training in a variety of fields. When they leave the military, they may or may not possess skills that are useful in the civilian labor market. Even if the skills are comparable to those needed in civilian jobs, many need additional training after they leave the service to qualify for civilian jobs in which they can apply their military skills.

There are strong differences of opinion about the career preparation outcomes of military service. Unfortunately, there are no definitive studies to settle the controversy. Until such studies are done, parents and young people will have to rely on the best information they can get and their own best judgment.

Informed Decisions

It is not my purpose to try to convince young people to either join the armed services or to stay out. I have tried to point out both the opportunities and the obligations. Some people find a home in the military. Others hate every minute. Each young person must decide, hopefully in advance, whether military service offers a viable career preparation option.

The favorable and unfavorable examples cited are probably extremes both in terms of what the military has to offer and what it delivers. I doubt that either extreme presents an accurate picture. A balanced assessment suggests that the possibilities of military service as career preparation undoubtedly fall somewhere in between. Whatever discrepancy there is between military promise and delivery of education and training will vary by the branch of service a young person considers and the particular program he or she enters. As with any other career decision, parents and their young people will want to get as much information as possible, think it through, and make their own decisions.

Young people contemplating military service to gain skills for a civilian career should do their homework before choosing a military specialty. Above all, they should remember that whatever else the military offers by way of opportunity or obligation, it is first and foremost an appeal for "service." Young people should find out whether there are civilian employment opportunities that relate to the military specialties that interest them. They should also inquire about the entrance requirements for the related civilian job, whether military training is sufficient to enter the area and, if not, what additional certification, licensing, educational levels, or training are required.

With respect to military service, I urge parents and young people to remember two things:

> The number one purpose of the military is to defend the United States, not to provide education and training for young people.
>
> The All Volunteer Force concept puts the service in competition with civilian educational and occupational opportunities; and parents and young people must not expect more from the military than it can provide.

What Parents Can Do

After finishing high school, young people have three career options: they can get more schooling, train for a career while working, or go to work at a full-time job. Part 4 in the Career Explorations Workbook outlined information to gather on educational options. Now is the time to reemphasize two labor force realities with sons and daughters:

> Most occupations require additional education or specialized training beyond high school.
>
> Employers hire people on the basis of credentials. Additional education and specialized training open up more and better occupational opportunities.

Career Explorations Workbook

When young people completed question 5 in Part 2 of the Career Explorations Workbook, they indicated whether any of the earning while learning options are appropriate forms of career preparation for the occupations that interest them. Now is the time for young people to complete the appropriate career preparation sections in Part 4. The information on apprenticeships, industry training and education programs, military occupational training, and full-time jobs following high school come from several different sources, and parents may want to help their son or daughter gather the material on these options.

If young people are interested in an apprenticeship, it is essential that they make personal contact with the nearest office of the Bureau of Apprenticeship and Training or an Apprenticeship Information Center. Young people may feel intimidated about walking into an apprenticeship office or center for the first time, and parents can help them take this necessary step by going along with them. While visiting the office or center, parents can make sure that their sons and daughters leave with answers for all questions and the right information about the next step to take. The Apprenticeship section in the workbook suggests information young people should get. Apprenticeship Information Centers do more than provide information. They also counsel young people and serve as a testing, screening, and referral source for applicants. Take full advantage of all services apprenticeship centers offer.

The best sources of information about industry training and education programs are the companies that offer the programs. Small companies–say, fifty employees or less–are not likely to offer training programs. But as companies increase in size, they are more likely to have structured training programs. Parents can help sons and daughters identify those companies by talking with a counselor at the local Job Service office, talking to counselors and instructors in high schools, two-year colleges, and technical schools. This section in the Career Explorations Workbook suggests information young people need and topics they should discuss with people in company personnel offices.

There are several sources of information about military occupational training. The primary source for detailed information on specific programs is the local recruiter. Addresses and telephone numbers of local recruiting offices for each service appear in the telephone directory in the "United States Government" section. Each service also has a toll-free number that I list in the Workbook instructions for Part 4.

The recruiter's goal is to enlist young people in the armed services. That point of view can be balanced by talking with people who are serving in the armed forces or have recently completed their service obligations. A young person should not sign on the dotted line without talking with people who have experienced military life first-hand. Recruiters are able to give detailed information on specific programs, but people in the armed services are the best informed about what life in the military is really all about

Conscientious Objectors

Some young people struggle with their beliefs about war and military service. If your son or daughter is thinking about being a conscientious objector, you can help by putting him or her in contact with a draft counselor from a peace group. One of the best places to start is:

American Friends Service Committee
1515 Cherry Street
Philadelphia, PA 19102
(215) 241-7230

If young people are thinking of enlisting, then it is a good idea for them to take the Armed Services Vocational Aptitude Battery exam (ASVAB) before they get mind and heart set on the specific job they want to sign up for. Of the hundreds of possible jobs, young people may qualify for only a much smaller number of possibilities. If that is the case, the sooner the real possibilities are known, the better it will be for all concerned. The ASVAB is a useful way to get a much clearer picture of exactly what the military has to offer.

Finally, there is an excellent book available titled *A Young Person's Guide to Military Service* by Jeff Bradley. I recommend it highly to parents and young people who are considering military service. The book is comprehensive, balanced, highly readable, short and to the point. Special chapters are devoted to women in the military, blacks in the military, and questions young people need to ask themselves.

Part 4 of the Career Explorations Workbook includes a section titled "Full-time Job Following High School." This section suggests that young people should talk with people currently working in the occupation that interests them. If young people are interested in full-time employment following high school, encourage them to think about long-range career goals and whether employment in a particular occupation will help achieve those goals without additional education or specialized training.

Today's career preparation options include programs that allow young people to work and earn while learning occupational skills. Whatever form of training young people take, even if they go straight to full-time work, there is a basic principle I advise them to follow: "Invest in yourself. Take advantage of every opportunity to upgrade your skills."

Next Steps

Next Steps in the Career Explorations Workbook helps young people size up where they are in their thinking about careers at this time. It inquires about what occupations and what forms of career preparation interests them most. It also suggests ways they can get additional information and how they can further explore their career interests.

After young people complete Parts 3 and 4 in the Workbook, parents may want to discuss these questions with them:

> Is there a good fit between the occupations and the career preparation options that interest them?
>
> What are the advantages and disadvantages of each form of career preparation?

> What form of career preparation is best for each occupation that interests them? Why?
>
> What form of career preparation is most appealing to them? Why?

If there are other occupations that interest them, perhaps others they listed in the Summary for Part 1, encourage them to explore these possibilities in the same way.

Next Steps lists several ways young people can get additional information about the occupations and career preparation options they favor. Encourage them to find out as much as they can about their choices. There is no substitute for first-hand knowledge and experience, and it makes sense for young people to "try out" their choices. As a parent you may be able to help them get a summer job, part-time work, or to at least talk to people who do the kind of work that interests them.

Finally, young people's interests change over time. If they develop new interests, encourage them to examine their new career interests and career preparation options following the same procedures they did in Career Explorations.

Epilogue

Historians may someday write that during the last decades of the twentieth century, the years in which we live, our nation became aware of its natural resources and decided to do something about them. The notions of conservation, environmental protection, ravaging of the forests and wilderness areas, water scarcity, oil depletion, pollution of the atmosphere, alternative energy sources, deterioration of the ozone layer, and nuclear disarmament have become everyday news themes. All have to do with our quality of life.

But what gets lost in the talk is that our nation's young people are our most important natural resource. That's what it's all about. There would be no particular need to conserve resources or to enhance the quality of life were it not for the fact that a generation of young people sits across our dinner tables, and we want them to survive us.

Today's young people need the same developmental attention as do our forests, potential energy sources, and the space sciences. To be concerned about the development of natural resources without being attentive to the development of human resources would be a case of misplaced emphasis.

It's easy to lose sight of our youth, our most important natural resource, in the daily shuffle and struggle. In this book I focus attention on what I believe are some overlooked realities.

The Role of Parents

There are 30 million young people in the United States between the ages of fourteen and twenty-one. Every year about two and one-half million graduate from high school. About two thirds of the graduates enter college, and about a fifth eventually take baccalaureate degrees. Today, nearly all young men and two-thirds of young women will enter the labor force eventually–either immediately after high school or a few years later. I am concerned, both personally and professionally, that one of the biggest problems today's young people face is making career plans. For a decade and a half studies of the nation's youth have reported that overwhelming proportions want and say they need more help choosing careers.

Parents, too, are concerned about their children's careers. Studies of parents find that "how to help my child choose a career" is one of their biggest parenting concerns–surpassed only by parental worries about drug and alcohol use and abuse.

Schools, teachers, and counselors have tried to meet young people's career guidance needs. Indeed, there is not an institution in the country that has done more to alleviate the problem than have the nation's public schools. Over the past decade enrollments have declined, but schools have increased the ratio of counselors to students. The quantity and quality of career-information resources–career centers, reference books on career choice and career-preparation possibilities, videos and films, interest inventories and computerized information services–have improved tremendously. Nonetheless, the ratio of students to counselors in public high schools is almost 300 to 1; and school guidance counselors are able to spend less than one hour of every five on career counseling. That means that the typical high school student today can expect to receive no more than an average of one hour per year of one-on-one career guidance. No wonder young people want and say they need more help choosing careers. No wonder parents sense the need. No wonder school counselors can't meet the need.

Even if schools were prepared to meet young people's career-guidance needs, teachers and school counselors cannot replace the primary influence parents have on their son's and daughter's career plans. The notion that "kids don't listen to me" in matters of career choice is a myth, and one of the tragedies of our day is that parents have come to believe the myth. The great hope for this generation of young people is that parents will recognize the influence they have on their sons' and daughters' career decisions and will prepare themselves to use that influence constructively.

Choosing a career means not only choosing an occupation, but it also means deciding on a career preparation strategy. We live in a credentialing society in which employers sort out prospective employees "on paper." That makes degrees and certificates critically important as doorways to the labor force.

Fortunately, today's young people have more career and career preparation possibilities than ever before. Unfortunately, the many options can be confusing. Today's young people need to learn how to make intelligent and responsible career decisions.

If parents are to be effective career advisers to their children, they must prepare themselves. There was a time when parents could feel comfortable about encouraging their sons to go into farming and their daughters to enter teaching. But things have changed. That's no longer where the action is. Today's labor market is much more complex. The space age, the computer revolution, and instant news are gentle reminders that today's young people live in a different world. There are new industries and opportunities that our generation never dreamed of. There are remarkable changes going on in the workplace–a huge generation clamoring for jobs, more women and racial minorities in the labor market, and a massive expansion of service industries and white-collar jobs accompanied by decreases in the portion of manufacturing and blue-collar jobs. As with any other human endeavor, we parents will have to take the time and put forth the effort if we are to help our children choose careers.

Finally, if parents are to be effective in helping their children choose careers, they must prepare themselves and they must have resources with which to work. Young people need guidance, not just information. Fortunately, there are resources for parents to use. I hope this book has been useful to you in bringing those resources together.

My Three Sons

I have three sons, and there are four things I want to give them. I want to help them gain a sense of who they are. That includes an understanding and appreciation of their social, cultural, and religious heritage and a wholesome feeling about themselves. I want to protect their physical and mental health and well-being over their developmental years. As they grow older that is increasingly up to them, but I want them to be able to launch out on their own, equipped with a healthy mind and body. I want to help them find and prepare for their own careers. That includes helping them choose and get the education and training they want and need. I am no different than any other parent in feeling that I really haven't done my job until I know that my children are on their own. Finally, I want them to know that I love them, and I don't know of a better way that I can show this–or that you can show it–than by helping our children choose careers.

Part Four: Career Explorations Workbook

Earning-While-Learning-Options

If you choose not to get more schooling after you finish high school, you can train for a career while working in an apprenticeship, through industry training and education programs, in military service, or by taking a full-time job.

The information for these possibilities comes from several sources. You may want to ask your parents to help you contact these sources and gather the information. The sections on apprenticeship, military occupational training, industry training and education programs, and full-time job following high school suggest questions you should ask when seeking information.

Apprenticeship

The Occupational Outlook Handbook gives general information about apprenticeship programs for occupations. Be sure you read the section on "Training, Other Qualifications, and Advancement" for the occupations that interest you.

The Bureau of Apprenticeship and Training provides apprenticeship information and services. Visit or call the nearest office of the Bureau or an Apprenticeship Information Center. The Bureau is listed in the telephone directory under United States Government, Department of Labor.

If you have a specific occupation in mind, visit or call the local union office or a large company that employs workers in the occupation that interests you.

These are questions you should ask about apprenticeship programs. Write the number of the question and the key words on your worksheet. Fill in the information.

1. What apprenticeship program interests you?
   Source of information?

2. ADMISSION REQUIREMENTS:
   What is the minimum age?
   Is a high school diploma required?
   What high school courses are recommended?
   What technical school courses are recommended?
   What are the required physical abilities?
   What skills and aptitudes are required?
   What kind of previous work experience is recommended?

3. APPLICATION PROCEDURES:
   How do you apply?
   When are applications accepted?
   Is an apprenticeship qualifying test given?
   Is an interview with a screening committee required?
   Is a physical examination required?

4. APPRENTICESHIP PROGRAM:
   What is the length of the program?
   Is the program registered with the Bureau of Apprenticeship and Training? (If "no," investigate the program thoroughly.)
   Is related instruction given at a local two-year college? Are correspondence or home-study courses available? (Is other instruction available)?
   What are the required courses?
   Is it possible to earn an associate degree as part of the apprenticeship program?
   How long is the apprentice probationary period?
   What is the starting wage?

What special clothing, tools, or materials must you purchase?

Is union membership required? (If "yes," how much are the dues?)

Is a journeyman card issued upon completion?

When you have completed all career-preparation options for this occupation, do the same for the next occupation that interests you. When you complete the career-preparation options for all occupations, continue with "Next Steps," the final section of Career Explorations.

Industry Training and Education

The main sources of information about industry training and education are the companies that offer the programs. There are three good ways to identify the companies.

- Go to the local Job Service office and talk with a counselor. The telephone directory lists Job Service offices under your state government listings. Look for Labor Department, Employment Security Division, or Job Service.
- School personnel may suggest companies with training programs. Talk to your high school guidance counselor, a high school or college instructor who teaches classes that interest you, or talk to a counselor in a two-year college or technical school that offers programs that interest you.
- Go to large employers in your area. They are the most likely to have structured training programs.

When you identify an industry training program that interests you, call the company's personnel office for an appointment to discuss possibilities.

These are questions you should ask about industry training and education. Write the number of the question and the key words on your worksheet. Fill in the information.

1. What kind of training interests you?

   Name of company?

   Name of person interviewed?

2. ENTRY REQUIREMENTS:

   What are the educational requirements?

   What kinds of high school or college courses are required or recommended?

   What skills or abilities are required?

   Is current employment with the company required before acceptance into the training program?

3. TRAINING PROGRAM

   What is the training like?

   Is there related classroom work? (If "yes," what subjects are taught?)

   Where are the classes held? (At the company? At a two-year college or technical school? Somewhere else?)

   How long is the training program?

   Does the training prepare workers for other types of jobs? (If "yes," what are the jobs?)

4. SALARY:

   What is the salary before training? After training?

5. BENEFITS:

   What educational programs are available?

   What other benefits are available?

When you have completed all career-preparation options for this occupation, do the same for the next occupation that interests you. When you complete the career-preparation options for all occupations, continue with "Next Steps," the final section of Career Explorations.

Military Occupational Training

The Occupational Outlook Handbook gives information about military occupations. It lists major occupational categories for enlisted personnel and describes related civilian occupations.

The military services print handbooks and pamphlets that describe entrance requirements, training and advancement opportunities, and other aspects of military careers. These booklets are available at recruiting stations, state Job Service offices, public libraries, and high school and college career centers.

The primary source for specific information is the local recruiter, who will provide information and answer questions. The telephone directory lists addresses and telephone numbers for recruiting offices under United States Government.

A Young Person's Guide to Military Service by Jeff Bradley is an excellent little paperback to read if you are thinking about joining the armed services. It will help you understand the advantages and disadvantages of a service commitment.

These are questions you should ask about military occupation training. Write the number of the question and the key words on your worksheet. Fill in the information.

1. What military occupational specialty interests you?

   Source of information?

2. TRAINING PROGRAM:

   What are the entry requirements for this occupational specialty?

   What is the training like?

   Will the military guarantee training in this occupation?

   Will the military guarantee that you get experience in this occupation after you complete training?

   Is the training completely specialized for military use?

   What civilian occupations are related to this military occupational specialty?

   Do civilian employers readily accept military training and experience in this occupation?

   What additional training or education may be necessary to qualify for a civilian job in this occupation?

3. MILITARY PROGRAMS:

   What educational benefit programs are available?

   Are any enlistment bonuses given for this occupational specialty?

   Are any officer training programs available?

   Benefits for part-time enlistment in Reserves or National Guard?

4. MILITARY LIFE:

   Do you know anyone in the military?

   How does that person describe military life?

When you have completed all career-preparation options for this occupation, do the same for the next occupation that interests you. When you complete the career-preparation options for all occupations, continue with Next Steps," the final section of Career Explorations.

Full-Time Job Following High School

One of the best ways to find out what an occupation is like is to talk with people who do the work. If you don't know anyone who works in an area that interests you, ask others–your parents, friends, relatives, neighbors, high school teachers, or counselor.

Find someone who knows the work well. If possible, talk to two or three people in that occupation. Most people enjoy talking about their work, but it is a good idea to talk with them after work hours so you won't interrupt their work schedules.

These are questions you should ask about a full-time job following high school. Write the number of the question and the key words on your worksheet. Fill in the information.

1. What occupation interests you?

   Source of information?

2. JOB DUTIES:

   What do people normally do on this job?

   What things do they like about this work?

   What things don't they like about this work?

3. ENTRY REQUIREMENTS:

   How did they get the job?

   What kind of training did they have for this work?

   What special skills do people need to do well in this work?

   What is the best way to get those skills?

4. SALARY:

   What is the average wage for a beginning worker in this occupation?

   After about five years, what is the average wage?

5. FUTURE POSSIBILITIES:

   Do people think they have a good chance to get promoted to another job in this line of work? (If "yes," what other kinds of jobs are generally available?)

   How often do workers get laid off in this kind of work?

   If they were laid off, do they think they would have difficulty finding another job in this occupation?

   What other kinds of jobs are available to people with experience in this work?

When you have completed all career-preparation options for this occupation, do the same for the next occupation that interests you.

If you completed the career-preparation options for all occupations, then continue with "Next Steps" on the following page.

Next Steps

In completing the Career Explorations Workbook, you identified occupations that interest you and career-preparation possibilities for each occupation. Now is a good time to size up where you are in your thinking.

At this time, what occupation interests you the most?

____

What is your second choice?

____

Of the basic career paths you can follow after you finish high school, which one are you most interested in at this time?

More schooling?	*Training for a career on the job?*	*Working at a full-time job?*
Which do you prefer?	Which do you prefer?	What occupation?
Four-year college?	Apprenticeship?	
Two-year college?	Military training?	
Technical school?	Industry training/education?	

You need not limit your occupational interests and career-preparation options to those you just explored. If there are other occupations that interest you or that you identified in Part 1 of this workbook, you can follow these same procedures to explore those career possibilities.

There are also ways to get additional information for the career possibilities and career-preparation options you examined:

- Write to the sources of additional information you listed in Part 2, number 9, for occupations that interest you.
- Talk with people in the occupations.
- Read books and materials about the occupations and career-preparation options that interest you.
- Consider colleges and schools other than those you reviewed in Part 3. Send for catalogs from those colleges and schools.
- Talk to people who are apprentices or run apprenticeship programs.
- Talk to people in the military.

You can "try out" your choices in several ways:

- Take related subjects in school.
- Find a summer job or part-time job in a related occupation.
- Participate in related hobbies, school activities, or volunteer work.
- Talk with students who are attending colleges that interest you.
- Visit colleges and schools that interest you.

Most important, talk with your parents about career possibilities and career-preparation options.

Your interests may change. Keep your Career Explorations worksheets. Look them over from time to time. If you develop new interests, explore them in the same way.

Chapter Notes

I have drawn from numerous sources for information and data that I use and acknowledge. Scholars who need complete bibliographic citations may contact the author.

Introduction

Population data is reported in public domain publications from the Bureau of Labor Statistics.

Education statistics are drawn from U. S. Bureau of the Census, Statistical Abstract of the United States: 1989 (109th Edition); and from Almanac, *The Chronicle of Higher Education*, September 6, 1989.

Information on enrollments in U.S. public schools and the number of guidance counselors comes from 1975 and 1989 editions of U.S. Department of Education, *Digest of Education Statistics.*

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Young people's inflated views of the cost of a college education are reported in an article by Denise K. Magner in *The Chronicle of Higher Education*, October 12, 1988.

Things Have Changed

Population data is reported in public domain publications from the Bureau of Labor Statistics.

Labor force projections are reported in U. S. Department of Labor, Bureau of Labor Statistics publications. A primary source is *Occupational Projections and Training Data*, 1988 Edition, Bulletin 2301.

Experiences of the baby boom generation is informed by an article from Martha Farnsworth Riche in *The Numbers News* (July 1988).

Information on Hispanics is drawn from an article by Thomas Exter in *American Demographics* (May 1987).

Information on years of college completed by adults is reported in *The Numbers News* (November 1988).

Information on migration is drawn in part from Martha Farnsworth Riche's article in *The Numbers News* (July 1988); from Thomas Exter's articles in the same source; and from Joe Schwartz' article in *American Demographics* (April 1987).

Information on changes in the labor force draws on material presented by Martha Farnsworth Riche in *American Demographics*, Vol. 10, No. 2, pp. 34-41.

Information on the graying of America is drawn from two articles: Charles F. Longino in *American Demographics* (June 1988) and Brad Edmondson in *American Demographics* (November 1987).

How Society Processes Young People

This chapter draws on earlier published work by the author in Geoffrey K. Leigh and Gary W. Peterson, *Adolescents in Families*, 1986.

The occupational prestige scale is the Duncan Socioeconomic Index.

The section on females and careers, particularly the discussion of family influences on female careers, draws on material from a book by Mary Frank Fox and Sharlene Hesse-Biber titled *Women at Work*, 1984.

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Beliefs, Values and Attitudes Make A Difference

Material on the relationship of values to occupations is drawn from Melvin L. Kohn, *Class and Conformity: A Study in Values, With a Reassessment*, 1977.

The quotations in the section on "Young Adults Look Back" are from unpublished information gathered in the Career Development Study, which the author directs.

How to Think About the Work World

A standard reference for the SOC is the U. S. Department of Commerce, Office of Federal Statistical Policy and Standards, *Standard Occupational Classification Manual*, 1980.

Descriptions of the 18 occupational clusters are drawn from an article by Martha C. White in *The Occupational Outlook Quarterly* (Spring 1988).

William Spady's article is published in the American Journal of Sociology (January 1971).

The section on pro athletes draws on statistics in an article by Michael Stanton in The Occupational Outlook Quarterly (Spring 1987).

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A publication by the Department of Labor titled *National Apprenticeship Program* (Revised 1987) presents a useful overview of apprenticeship programs and lists state and regional offices of the Bureau of Apprenticeship and Training.

The Bureau of Apprenticeship and Training now lists over 800 occupations that are apprenticeable. A listing that also gives the number of years of training involved is available from a local office of the Bureau.

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